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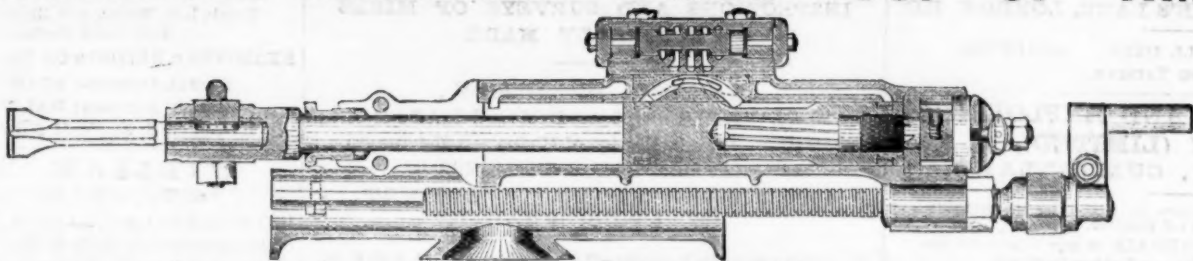
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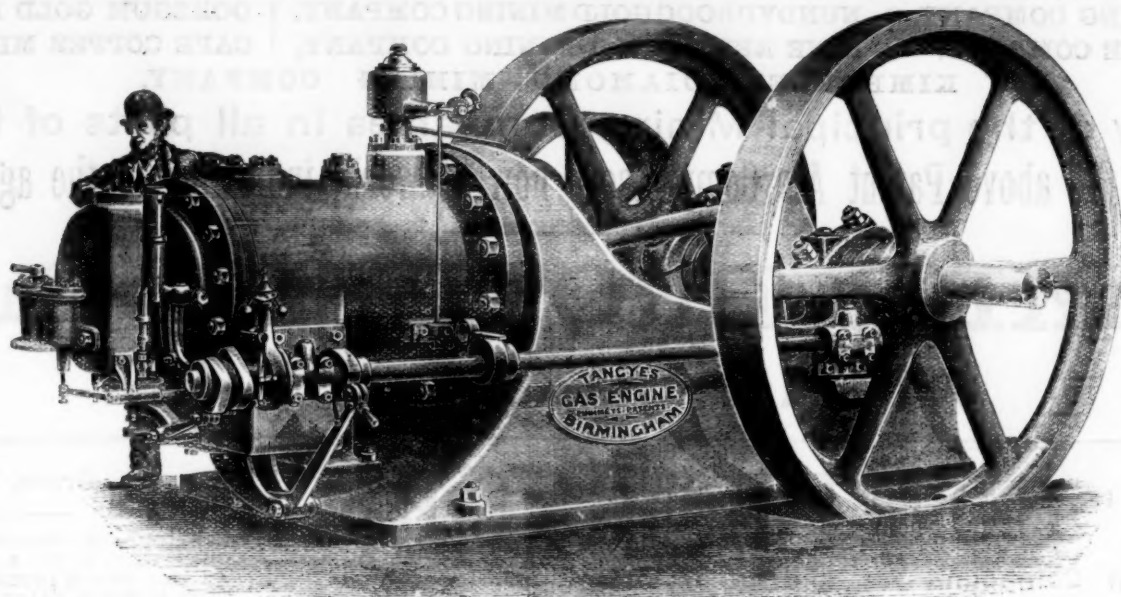
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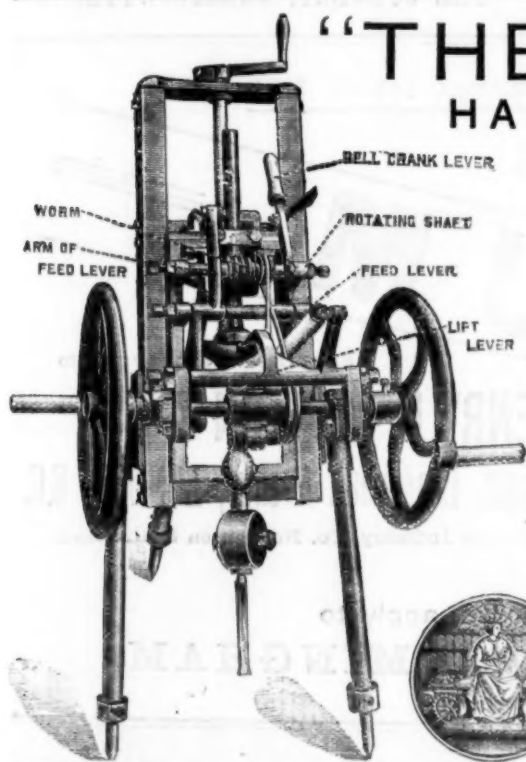
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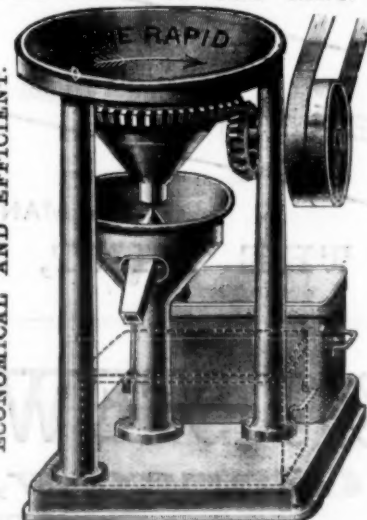
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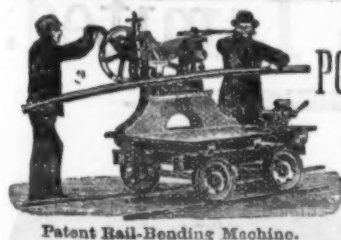
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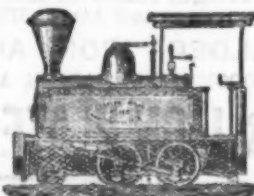
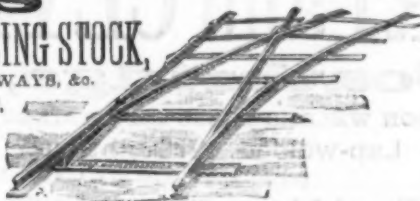
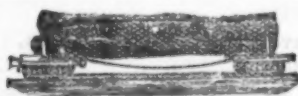
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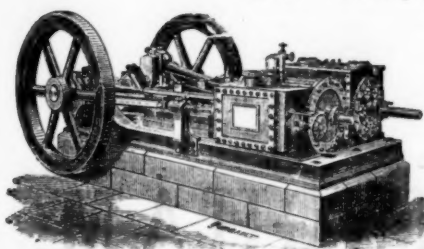
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A Special Plant, on a reduced scale, has been erected at the
Works by which samples of METALLIC ORES—up to Five Tons
may be treated, and the commercial value determined, in this
way the most suitable arrangement of Plant is ascertained, a con-
siderable advantage to intending Purchasers of Crushing and
Concentrating Plant.

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THE FOUNDRY, ABERYSTWYTH.

Gold Medal, International Exhibition, Paris, 1889.

Gold Medal, Exhibition of Mining & Metallurgy, London, 1890

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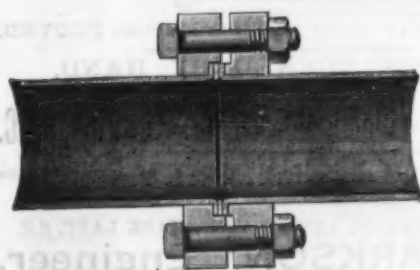
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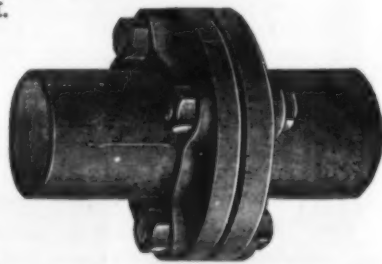
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FOR LOCOMOTIVE, MARINE, AND OTHER MULTITUBULAR BOILERS.

STEEL & IRON PLATES FOR BOILERS, BRIDGES, &c.



SECTION OF PATENT FLANGED JOINT



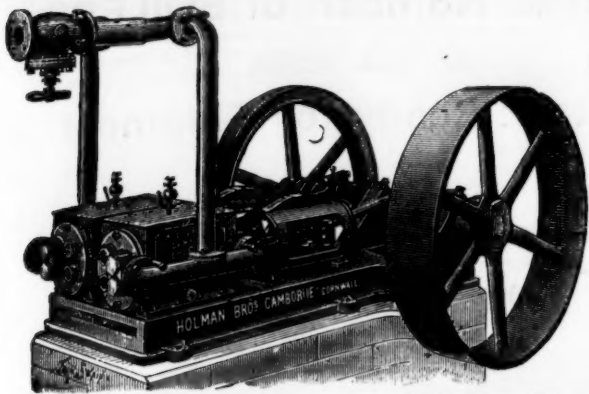
PLAN OF PATENT FLANGED JOINT.

Head Offices : 41 OSWALD STREET, GLASGOW.

HOLMAN Bros., Camborne, Cornwall.

ESTABLISHED 1839

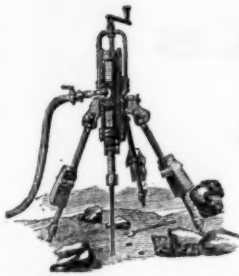
Patentees and Sole Makers of
"THE CORNISH" ROCK DRILL and "THE CORNISH" COMPRESSOR.



FIRST
SILVER MEDAL,

Highest Award,
Mining Institute
Contest, 1881.

Three Makers
represented.



FIRST
SILVER MEDAL

Highest Award,
Royal Cornwall
Polytechnic
Jubilee Exhibition
Contest, 1882.

Five Makers
represented.

AWARDED SILVER MEDAL INTERNATIONAL
INVENTIONS EXHIBITION, 1885.

RECORD OF WORK DONE

At Botallack Mine, St. Just, Cornwall, **TWELVE MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** drove, sunk, and rose **288 FATHOMS** in **12 MONTHS**, equal to five times the Speed of Hand Labour.

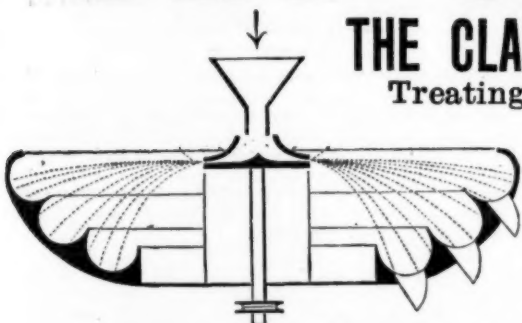
At Wheal Grenville Mine, Camborne, Cornwall, **SIX MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** started from the **150 FATHOMS** level and put up in **EIGHT MONTHS** a **11 FEET** by **5 FEET PERPENDICULAR RISE 46 FATHOMS 5 FEET 6 INCHES**, and about midway drove **1 FATHOM 5 FT.** No communication of any kind was effected until holing to the Shaft brought down from surface.

Estimates for **ROCK BORING PLANT** and **GENERAL MINING MACHINERY** on Application.

London Representative: Mr. E. M. TOUZEAU, Leadenhall Buildings, London, E.C.

Highest Award at the Mining Exhibition, 1890.

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THE CLARKSON-STANFIELD CONCENTRATOR (LIMITED), are successfully
Treating the ores of Gold, Silver, Copper, Lead, Tin, Zinc, Cobalt, &c., &c. of all
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MACHINERY which may be seen in operation at

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Homogeneous substances, such as Emery, Glass, Sand, Sulphur, Black
Lead, &c., graded according to size in one operation.

Terms for Experimental Concentration, and for Supply of Machines on Application.

NEW PATENTS.

LIST of APPLICATIONS for New Patents relating to Mining Metallurgical, Engineering, Railway and kindred matters, specially compiled from official sources for the "Mining Journal" by Messrs. Rayner and Company, Patent Agents, 37, Chancery Lane, London, W.C., who will forward all information regarding them free on application.

- 375 Samuel Mason, Brandon Street, Belgrade Road, Leicester.—Improvements in toggle plates for stone-breaking and ore crushing machines.—January 8.
- 388 Enoch Skinner, Bank Buildings, George Street, Sheffield.—Improvements in valves of pneumatic hammers.—January 8.
- 398 Herbert Cutting, Vulcan Iron Works, Peddar's Lane, Beccles, Suffolk.—Improvements in gas, steam, and other fluid motors.—January 8.
- 412 Hermann Friedrich Martin Kayser, 323, High Holborn, London.—Improvements in centrifugal separators.—January 8.
- 418 John Walter Brooke, 8, Quality Court, Chancery Lane, London.—An improved friction clutch.—January 8.
- 453 James Alfred Todd, 12, Cherry Street, Birmingham.—Improvements in haulage clips.—January 9.
- 460 Benjamin Austin Burgess and David Perry Roux, 1, Rebecca Street, Hamilton, Ontario, Canada.—Improvements in steam lubricators.—January 9.
- 483 Edward Seltz and Richard Pickup Park, 97, Newgate Street, London.—Improvements in centrifugal pumps.—January 10.
- 502 Annie Carr, 351, High Holborn, London.—An improved block for hoisting and analogous uses.—January 10.
- 507 William Samuel Sargent, Lion House, Twickenham, Middlesex.—Improvement in water tube steam generators.—January 10.
- 577 Ernest Otto Schlick, 46, Southampton Buildings, Chancery Lane, London.—Improvements in steam engines.—January 10.
- 619 Robert Ogden Taylor, James Oakes, and Joseph Rowe, 17, St. Ann's Square, Manchester.—Improvements in self-acting mules and winches.—January 11.
- 631 John William Harrison and John William Kilner, 21, Barstow Square, Wakefield.—Improvements in couplings for ropes.—January 11.
- 644 Emil Laemann, 24, Southampton Buildings, Chancery Lane, London.—An apparatus for recording the speed of the governors of motive power engines.—January 11.
- 659 Lowry Radden and Robert Eeles, 46, Lincoln's Inn Fields, London.—Improvements in apparatus for the application of liquid fuel to furnaces.—January 11.
- 711 Jean Seche, 38, Alexander Strasse, Berlin.—Improvements in pneumatic hammers.—January 12.
- 741 Henri Baschy, 46, Lincoln's Inn Fields, London.—Apparatus for removing scale from stay bolts, stays, and the like in steam boilers.—January 12.
- 754 John Longton, 6, Bank Street, Manchester.—Improvements in steam-traps.—January 12.
- 778 Henry Campbell, Commercial Street, Halifax.—Improvements in oil and gas motor engines.—January 13.
- 814 Alfred J. Boul, 323, High Holborn, London.—Improvements in or relating to friction-driving speed changing mechanism.—January 13.

SPECIFICATIONS PUBLISHED.

2220, Granger, boiler furnaces, 1893; 2450, Dyson, marine governors, 1893; 2038, Lucas, furnaces, &c., 1893; 2977, Horsfield, steam boilers, &c., 1893; 20,936, Woodward, furnace fire bars, 1893; 22,490, Schmidt, steam engines, &c., 1893.

The above specifications published may be had of Messrs. Rayner and Company 15, Chancery Lane, London, at 10d. each including postage.

CONTRACTS OPEN:

FOR MINE, QUARRY, RAILWAY, AND ENGINEERING WORK, STORES, &c.

* * We shall be obliged by being promptly placed in possession of particulars regarding contracts open for competition, and of the results of successful tenders. In the latter case contract prices should be given.

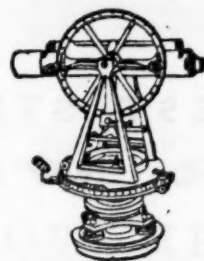
The date given is that by which tenders must be delivered, in nearly all cases further information can be obtained on application at the addresses given. In applying for such the name of "The Mining Journal" should be mentioned as the original source of the information, concerning which further particulars are required.

HOME CONTRACTS.

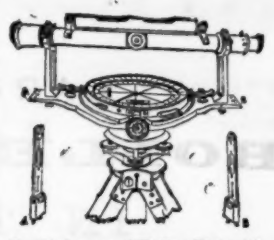
- Railway Construction, January 29 (Breachin).—**For the construction of a line of railway about 5½ miles in length and station buildings for the Brechin and Edzell District Railway. Specifications and conditions of Messrs. Shiell and Don, solicitors, Brechin, N.B. Tenders to be addressed to Mr. W. Shiell, 35a, Great George-street, Westminster.
- Steel Girder Bridge, January 30 (Glasgow).—**For the erection of a steel girder bridge over the River Camou in 14 spans with piers of cast iron screw piles, and also for a steel girder bridge over the River Orrin in three spans for the Mid-Ross District Committee. Drawings to be seen at the office of Messrs. Crouch and Hogg, C.E., 175, Hope-street, Glasgow.
- Pump, January 31 (Athy, Ireland).—**For supplying and erecting a pump at Ballyadams well for the guardians according to specification to be seen and copied at the Board Room, Athy.
- Pumping Machinery, February 5 (Richmond, Surrey).—**For providing and erecting a new pumping engine and pumps at the Water Works, Riverside, Richmond, for the Town Council. Plans and specifications of Mr. W. G. Pierce, Borough Water Works, Riverside, Richmond. Tenders to be addressed to Mr. F. B. Senior, Town Hall, Richmond, Surrey.
- Brake Vans, February 6 (India Office).—**The Secretary of State for India is prepared to receive tenders for the supply of (1) brake vans, &c., (2) spans. Conditions of contract to be obtained on application to the Director-General of Stores, India Office, Whitehall, S.W.
- Steel Girders, February 7 (York).—**For the construction of about 360 tons weight of steel girders varying in length from 11 feet to 28 feet, to be delivered in the company's wagons, at the station nearest to the builder's yard for the North Eastern Railway Company. Plans to be seen and specifications and quantities obtained on personal application to Mr. H. Copperthwaite, engineer's office, York.
- Railway Stores, February 9 (Belfast).—**For supplying during next year the Belfast and Northern Counties Railway Company with various stores. Patterns and samples to be seen at the General Stores Department, Belfast, and forms of tender to be obtained on application to Mr. Ellis, stores superintendent, York Road Station, Belfast.
- Sinking Pit, (Haywood-by-Auchengray, Scotland).—**For sinking pit at Haywood from the gas coal seam, to under coal seam. Particulars from the Manager, Shaft (Chorley).—For sinking a shaft to the Mountain Mine at Chorley. Particulars of Mr. Rigby, Mining Engineer, King-street, Wigan.
- Colliery Stores, (Sunderland).—**For twelve months' supply of colliery stores for the Ryhope Colliery, near Sunderland. Forms of tender at the Colliery.
- Sinking Pits (Aberberg, Mon.).—**For the sinking of two pits near Aberberg, Monmouthshire, to the steam coal measures. For particulars apply to Messrs. John Lancaster and Co. (Limited), Blaenau, Mon.
- Construction of Railway (Madrid).—**The Secretary of State for Foreign Affairs has received from Her Majesty's Ambassador at Madrid, a copy of a royal decree, inviting tenders for the construction of a railway from Manila to Taal by Calamba and Batangas. The decrees can be seen at the Foreign Office, S.W., on week-days between 11 and 6.

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SECTION (A) MATHEMATICAL DEPARTMENT AND SAFETY LAMP SECTION (B) ELECTRICAL DEPARTMENT.

Gold Medal Awarded Mining Exhibition, 1890.

"THE ENGINEERING TELEGRAPH CODE USED."

MR. P. S. HAMILTON (late Chief Commissioner of Mines of the Province of Nova Scotia), PRACTICAL GEOLOGIST, MINING AGENT AND MINING ENGINEER, HALIFAX, NOVA SCOTIA. PURCHASES and SALES of MINING PROPERTY effected, with careful regard to the interests of clients.

OUR INQUIRY COLUMN.

TO CORRESPONDENTS.

Correspondents will please take note that all communications will in future be answered in this column and not through the medium of the post.

QUERIES.

J. B.—Can any of the readers of *The Mining Journal* inform me as to the value of arsenical pyrites?

REPLIES.

BALLANTYNE.—We have heard nothing of the company since they ceased sending reports to us for publication. Their address cannot be found in authentic books.

A SURFACE OWNER.—Your communication will be answered next week.

P. N.—Yours is the first intimation we have received of the project.

T. S.—The company has gone into liquidation.

F. M.—The gentleman to whom you refer died some time since, and his death was duly announced in our columns.

GOLD MINER.—An interview on the subject appeared in *The Mining Journal* of the 25th of February last year.

REX.—It would be to your interest to leave the shares alone.

J. C. B.—There was a considerable business done in the shares last week. It is our opinion that the company has a promising future.

ALPHA.—The shares have no nominal value.

QUERIST.—The price will in all likelihoods remain steady for some time to come.

NEMO.—Not at present.

O. T.—The returns are certainly encouraging, and we would advise you to hold on to the shares.

W. M.—The present price is 3s.

MINER.—The loss which the company has incurred is attributable to bad management.

MEXICAN.—The mine commenced making profits in October last.

OUR HEALTH IN WINTER.—Dr. Andrew Wilson, writing in *Lloyd's Newspaper* on diet, says:—"The teaching of nature should never be neglected, and in the matter of winter food let us see we are not wrong, and take sufficient fat, for the changes that result in the wear and tear of our bodies are lessened in intensity by the fat of food, and the need for flesh is always less when fat forms a due proportion of our diet." The Doctor proceeds to enumerate natural products that are admirable, among them "Cocoa" with its contained Cocoa Butter. Relatively to this it may be said that EPRA'S PREPARED COCOA retains all the constituents of the natural Cocoa, including the oil or butter, intact.

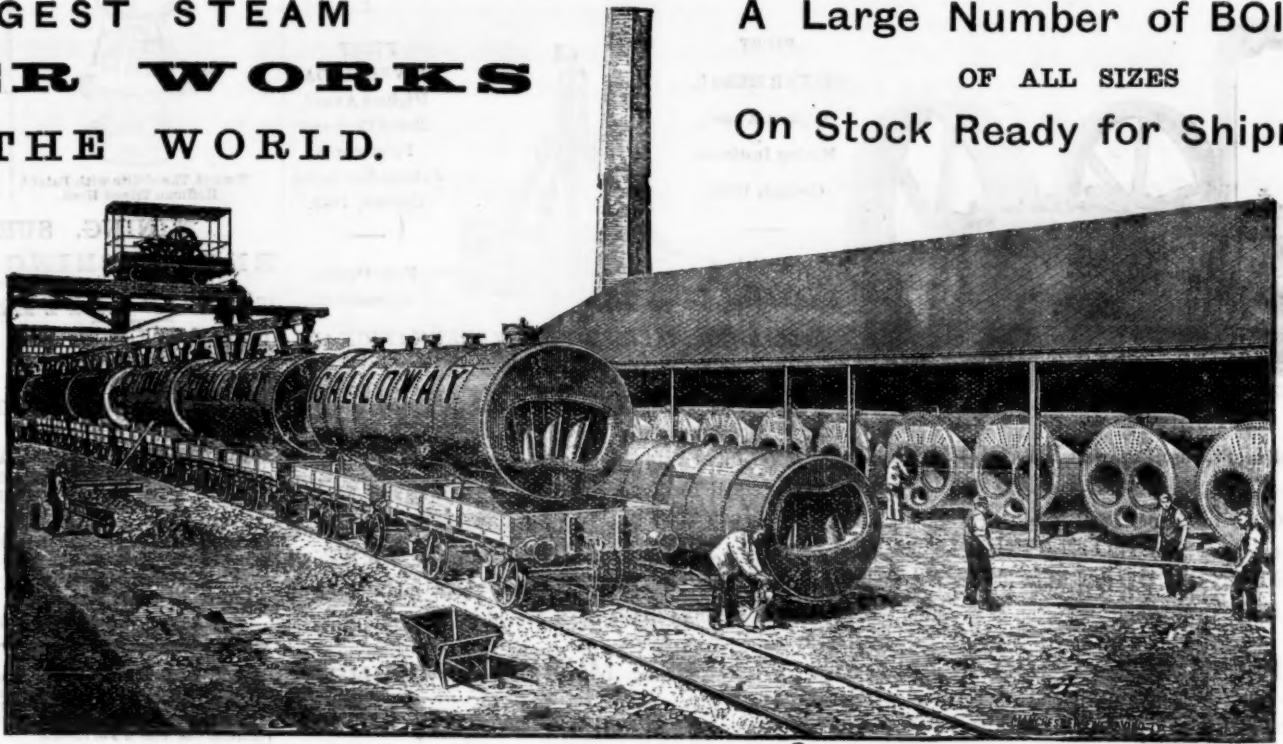
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GRAND PRIX
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GOLD MEDALS
AT ALL RECENT
EXHIBITIONS.



MECHANICAL ENGINEERING: MACHINERY, MINING and RAILWAY PLANT, &c.

Illustrated Descriptions of New and Standard Mechanical Appliances, Accessories and Processes, adapted to Mining, Metallurgical, Railway, Engineering and other Industrial Purposes.

A NEW GOLD-SAVING PROCESS. SUTTON'S CENTRIFUGAL CHLORINATOR.

MR. J. W. SUTTON, of Brisbane, was engaged some weeks ago at the Mount Morgan Gold Mine in carrying out a series of trials on the various kinds of ore there with his small chlorinating, leaching and precipitating plant, capable of treating about two tons per day, the results being exceedingly satisfactory and promising in the near future to make a radical change in the present methods of gold recovery by the chlorination process. The process and apparatus are thus described by the inventor in *The Australian and Mining Standard*.

The chlorinator consists of a wrought-iron barrel lined with lead, containing a central tube perforated, and covered with asbestos cloth; attached at the left-hand side of the barrel is a smaller one, also lined with thick lead and has a steam jacket. The whole is mounted on cast-iron trestles and driven with gearing at the rate of four to six revolutions per minute. The ore to be treated is slightly damped and let into the barrel by the doors on the top, from a hopper on the upper floor, and when quite full the hinged doors are screwed up; at the same time a sufficient quantity of salt, manganese, and sulphuric acid to chlorinate the contents of the large barrel is put into the smaller one and the whole set revolving. The chlorine which is at once given off from the mixture passes through an aperture into the central tube of the large barrel and percolates through the asbestos cloth into the ore: the revolving action always keeping the ore sufficiently loose for the gas to enter thoroughly amongst the ore, and at the same time keeps the chlorine mixture in the smaller one well agitated. When the evolution of gas begins to lag steam is turned on until all the mixture is decomposed. Valves are placed on the side of the barrel to let out all the common air while the gas is entering, thus insuring good and strong nascent gas.

Three hours is found to be sufficient time to convert the gold into chloride; the barrel is then stopped, and the contents let into a hopper ready for leaching, at the same time the residue from the small barrel being run out. The leaching machine is a centrifugal similar to that used in drying sugar; it is driven direct by a small engine on top of the framing. The spindle which carries the basket has a coarse pitch thread its whole length, upon which works a drum, which when down in the basket, leaves an annular space between it and the sides of the basket, which are perforated and lined with asbestos cloth. The ore from the hopper being let down on to the top of the drum, the centrifugal force slides it off into the annular space, and as soon as this is filled a friction cone on the drum top is brought into action, and it is withdrawn clear of a workman's head. A clear faced body of ore is then revolving at about 300 revolutions per minute, water is turned on this face, and by the centrifugal force is sent direct through into the outer casing, carrying with it all the gold in solution. By this means of leaching only about one-tenth as much water is used as by the ordinary method of vat work, and the time required is only about seven minutes per charge of 10 cwt. to 20 cwt. When by the usual test the solution flowing from the outer casing gives no gold re-action, a small mechanical plough is introduced which scoops the spent ore out at the bottom into trucks, or into shoots to be conducted to the waste tailing heap. The solution of gold is then run into the precipitator, which is a rectangular tank; with a spindle driven through it from corner to corner and driven by pulley at about 40 revolutions per minute.

Into this precipitator is put sufficient sulphate of iron and kerosene oil, and when half full it is set revolving for about ten minutes, by which time the whole of the gold has been precipitated, and the precipitate thoroughly greased by agitation with

the oil, so that when it comes to rest the water with the base metals in solution lies at the bottom, the gold and oil on the surface. A tap is opened and all the water runs away through a safety sand filter, and the oil and gold is then run into a receiver, and thence into a small centrifugal, whereby the oil is immediately separated, leaving the gold in the basket, from which it is simply scooped out and melted, and the oil is taken back for use over again. The plant is capable of treating 30 tons in 24 hours.

AUTOMATIC UP-CURRENT "TUBULAR" EXHAUST VENTILATORS.

Some attention has recently been drawn to a new automatic up-current "tubular" exhaust ventilator, the production of the well-known firm of John King, Limited, for which are claimed exceptional advantages. To those who frequently visit buildings or public assemblies the importance of any contrivance to effect a happy medium between an unhealthy impurity of atmosphere on the one hand, and an equally unhealthy accession of draughts on the other, is not likely to be underrated. Numerous as the sands upon the sea-shore have been the attempts to meet the imperative demand for some simple but effective instrument of ventilation, and many have seemed to come very near to perfection without actually achieving it. Every invention, whether it wholly succeeds or not, carries us at least a step nearer to the desired end, and upon that account, if upon no other, this new departure may be cordially welcomed.

The main features of this ventilator consist of specially formed tubes which are grouped vertically, and communicate with the exhaust ventilating shaft. Each tube has a vertical side outlet opening, facing, and so protected by, a central tube, that the slightest wind current from any direction, instead of obstructing the free outlet of the air from below, is directed across, and owing to the special formation of these openings, creates a direct vacuum inside the tubes, which exerts its extracting force entirely upon the vitiated air to be removed.

In the group of tubes forming the ventilator, each separate tube is practically an independent ventilator in itself, also utilising to the full the extracting power derived from the wind, and drawing solely upon the vitiated air from below. There is one clear outlet opening to each tube, and the vacuum created within by the wind crossing this outlet cannot be destroyed by an inrush of outer air into the tube through any other opening, but can only be supplied by the vitiated air, which latter is thus acted upon direct by the full power of the vacuum, this arrangement giving enormously increased power and sensitiveness.

The ingenious reciprocal formation of these tubes provides for the complete utilisation of the full power of all external wind and air currents. In addition to this extraordinary and abnormal utilisation of power, which is attained without the slightest obstruction of the outlet openings, the invention embodies the unique advantage of entirely prohibiting rain or snow from entering the ventilator. So perfect is this part of the invention that the ventilator could actually be immersed without its admitting any water into the upcast shaft. No movable parts or valves of any kind are used to effect this, and there is nothing whatever liable to get out of order.

A PROCESS OF SAVING FLOUR GOLD FROM SLIMES.—John H. Hobart of Oakland, is the inventor and patentee of a process of saving "flour" gold from slimes and whatever escapes a mill. The device has recently been in operation at the Harmony (gravel) mill, Nevada county, and is claimed to have saved not less than 2 ounces of amalgam per day, and in 20 days 47½ ounces. As described in the *Herald*, the device consists of a closed box about the size of a butter box, and is set up at an angle of about 45 degrees. The water bearing the slimes from the mill passes over a plate and into the box, which is divided into three compartments. It runs on to a plate which is bent at right angles and is covered with a screen; striking the plate at one edge and running down, thence back to the rear edge, thence to the bottom of the box, running on to the second screen, and finally the third. The bottom of the box is covered with plates. The box has a lid which fits tightly, and three plates are fastened to the lid so that when closed they hang in the water, and between the three compartments. These are intended to catch the flour gold floating on the surface of the water. The device is to be used also at the Champion quartz mine.

MINING IN CORNWALL AND DEVON: NOTES ON WESTERN MINING, EDITORIAL AND OTHERWISE.

THERE seems to have been a fairly general expectation that an improvement in the share market was imminent; and, indeed, this was justified to some extent by the fact of a slight recovery in tin and some advance in prices. We cannot say, however, that the aspect of affairs has really increased in hopefulness in the past few days, barring the fact that there is manifestly a more healthy tone pervading business. There may be some time before this really develops into satisfactory results; still it is something so far as it goes.

NEXT to an entire stoppage of results in Dolcoath, a dividend of 5s. only is one of the most serious influences—on the face of it—in the wrong direction with regard to the direct prospects of Cornish mining. Moreover, it is far, very far, below the figure that was commonly looked for as the minimum, and only a third of the expectations of the optimistic. It must at once be confessed, however, that these expectations were unreasonable. Such, then, is the worst light in which the issue of the Dolcoath account can be placed; and it is just as well to face it at once, for then we can deal unfetteredly with the *per contra*. And we are bound to say that so far as the prospects of Dolcoath itself are concerned, this *per contra* is satisfactory, and not merely satisfactory, but highly satisfactory. The mine is looking quite as well as ever, indeed no richer piece of ground has ever been seen in the mine than part of that which is now in sight, and directly the work of securing the ground affected by the recent run is complete the returns will be as great as ever. The present depression so far as the mine is concerned is but a temporary and a rapidly passing cloud, and the more clearly and definitely that can be understood the better.

BUT directly we get beyond the mine itself, and face the problems of the tin market, all is dark. Captain Josiah Thomas frankly confesses he is unable to solve the mystery. Nor, we take it, can any one else outside a very limited circle, who have very good reason for keeping their own counsel, but who in the long run have inevitably to succumb to the operation of economic laws. It is perfectly clear that on the face of affairs there is no reason whatever why tin should be selling at such an absurdly low figure. Then comes the question—is it policy for a mine like Dolcoath to put its produce on the market at a sacrifice, or to contract operations until they become more remunerative? Were the mine his own, Captain Josiah would have no hesitation in acting, and what would be for the interest of a single owner ought to be for that of a number. Stocking tin is in the long run, as a rule, not a paying game; but there is essentially little difference between raising the tin and holding it, or stocking it in reserve by not raising it. Probably here, as often, the middle course is the best, producing what is useful to carry on a small dividend, and therewith being content until better times.

ATTENTION has again been called to the recent discovery of petroleum in connection with coal strata in Somerset; but we have not yet heard the result of the official or semi-official enquiries that have been arranged. Meanwhile it may be well to remark that this is by no means the first instance in which rock oil has occurred in the West, particularly among the carboniferous rocks in the north of Devon, though, of course, not in anything like commercial quantities. It is worthy of note too that thin films of oil are occasionally found floating on the water issuing from peat bogs in Devon and Cornwall—the former more particularly, evidently the result of organic decomposition.

IN view of the increasing number of miners thrown out of work in the county, and the distress existing also in districts where Cornish miners have been so largely employed abroad, it seems by no means unlikely, unless there is a speedy improvement, that the local authorities will have to make special efforts to grapple with the situation, possibly by way of relief works. The strain upon the rates in some localities is rapidly getting practically to its utmost limit, and then something will have to be done.

WESTERN AUSTRALIA'S GOLD WEALTH.

THE FUTURE OF COOLGARDIE—THE MURCHISON AND YILGARN GOLD FIELDS.

Interview with MR. H. J. SAUNDERS, A.M.I.C.E.

THAT Western Australia is coming rapidly to the front, and that it is destined to be one of the most productive gold centres of the world, we have daily testimony. The reports we receive from this quarter of the globe testify to its increasing richness, and to the vast treasures of wealth still unexplored and awaiting discovery and development. No one can any longer doubt that in Western Australia we shall ere long have to welcome a rival to the far-famed Randt. Indeed, for one moment concentrating in our mind's eye the prominent gold fields of the world, and bearing in mind that one and all are increasing their output every year, we may dwell passing upon the pleasing reflection that the gold mining industry is but in its infancy. Then, contemplating the period of time that must elapse before it attains to youth or manhood, and ere it passes on to the decline of old age, we may conceive contentedly and pleasantly a vast era of increasing prosperity; an unlimited field for enterprise and energy; a grand scope for the practice and spread of science; and, more than all, an uninterrupted flow of profits and dividends. This may be taking a somewhat optimistic view of the future, but it is an imaginative picture which no one will deny can possibly or probably be realised in fact.



H. J. SAUNDERS, ESQ., A.M.I.C.E.

In dealing with Western Australia no article or interview would be complete without a reference to the famous Coolgardie Field and Bayley's claim. It was to the discovery of the latter that the colony more directly owes its present prominence. All eyes are directed towards it, and every report that comes from there is read with eager interest. The wealth of it seems inconceivable and fabulous, and it is more a spirit of scepticism

A Remarkable Output.

than faith which prompts immediate attention towards it. As a proof of this we refer our readers to the illustration herewith, which is from a photograph taken a short time ago in the presence of Mr. Willis, the well-known manager of the Union Bank of Australia, in Perth.

In a certificate accompanying the photograph, Mr. Willis says:—

I have pleasure in testifying that gold bars and quartz specimens stated to be, and beyond doubt, from the mine known as Bayley's Claim at Coolgardie, the property of Bayley's Reward Claim Company, were received by me from Mr. Everard Browne, a member of the company, on the 6th instant, having been brought from the mine by him under escort. They were exhibited in this bank on the following day, during which large numbers of people inspected them. They were also photographed in my presence.

The quartz specimens weighed in gross 80 lbs., and are estimated to contain 600 ounces of gold. The gold bars, 22 in number, consisting of practically pure smelted gold, weighed in all 3605 ounces 15 dwts. 8 grains, as follows:—

No.	Ozs. dwts. grs.	No.	Ozs. dwts. grs.
1.....	193 11 0	13.....	164 5 0
2.....	187 16 0	14.....	156 13 0
3.....	151 0 12	15.....	185 18 0
4.....	156 6 12	16.....	163 19 12
5.....	163 18 12	17.....	158 10 12
6.....	162 6 0	18.....	157 16 0
7.....	164 5 12	19.....	197 8 0
8.....	155 14 0	20.....	167 1 12
9.....	161 0 0	21.....	199 8 0
10.....	156 5 0	22.....	128 14 0
11.....	162 8 6		
12.....	161 11 0		
			3605 15 8

Previous similar consignments were received by me from the same mine, and exhibited as follows:—

Received on 8th April, 1893, and exhibited on 10th, 11th, and 12th idem:—

Gold bars and cakes of retorted gold, containing	Ounces. 1867
Quartz specimens, estimated to contain	633
In all	2500

Received on 17th June, and exhibited on 18th and 20th idem:—

Gold bars	Ozs. dwts. grs. 1603 17 23
Retorted cakes	506 8 0
Dolled and alluvial gold	449 5 0
Quartz specimens, estimated to contain	626 0 0
In all	3185 10 22

Mr. Saunders, whose opinions we lay before our readers for their information and judgment, is intimately acquainted with this field; indeed, with Australia generally, though with the

western portion of it more particularly. He but lately arrived in England after spending ten years in the colony, and naturally he called at the office of this Journal to pay his respects to us. With the compliments he lavished upon us we need not concern our readers. What we are more interestingly concerned with is whether he can furnish us with fresh information respecting Western Australia generally, and Coolgardie in particular; whether he can confirm or otherwise the glowing reports we receive as to its enormous resources and wealth; and whether he has any hopes and inducements to hold out to those connected directly and indirectly with the mining profession.

Mr. Henry J. Saunders is the second son of T. B. Saunders, Esq., J.P., of Bradford-on-Avon, Wilts, and was born in 1855. He was educated at Clifton College, and then went through a course of instruction at the Crystal Palace Engineering School, after which he was articled to Professor Robinson, of No. 13, Victoria Street, Westminster, S.W., in whose employ he remained until his health broke down.

In the year 1884 he went out to Western Australia for the improvement of his health, under the advice of the late Sir Andrew Clark, Bart., M.D., &c. He considers he owes his life to the splendid dry climate of Western Australia, for it has completely restored him to health, and since he has returned to the old country he has not spared himself in gratefully advancing the interests of the colony. He is proud of being a colonist of Western Australia, and he has every faith in its future. By profession he is a civil engineer, being an Associate Member of the Institution of Civil Engineers. In conjunction with his late partner, Mr. Barratt, A.M.I.C.E., he designed the Perth water-works—now completed—and also executed the plans and sections for the Midland Railway of Western Australia, now in course of construction. When gold was first found in the colony he turned his attention to mining, and was for two years President of the Stock Exchange, Perth, of which he is still a member.

The Coolgardie Goldfield.

"Well, Mr. Saunders," was our first query, after being comfortably seated, "what is your opinion respecting Coolgardie? Is it as promising as reports would have us to believe?"

"Quite as promising," replied Mr. Saunders, in a tone of fixed conviction. "Almost every reef which has been discovered has paid to 'dolly,' but unless a man has sufficient capital to keep himself for a few months he would be unwise to go to Coolgardie, unless he is content to work for wages, though of course some few lucky ones contrive to sell their claims to capitalists."

"Does the field possess abundant facilities for working?"

"There is an abundance of timber at or near Coolgardie."

"Has it a good water supply?"

"Plenty of rain falls and it only requires conserving. The Government are now building tanks at and about Coolgardie capable of holding 15,000,000 gallons of water. These will be finished before the rains set in. Several bores and shafts have been put down, in many of which water has been obtained. One of the managing owners of Bayley's Reward Claim writing to a friend of mine a week or two ago said 'I believe the water difficulty will soon be a thing of the past.' I fully concur in this opinion from the results obtained in other parts of the colony."

"Is there, likewise, plenty of labour and timber?"

"Plenty of timber can be obtained, and there has hitherto been a superabundance of labour, and more will be attracted once the fields get into full work and machinery is erected."

"What machinery is on the field?"

"Practically none at all. Bayley's have only a 4-horse oil engine and Panklast and Borden amalgamator. This company has purchased a battery, but it is not yet erected. The West Australian Goldfields (Limited), have sent out machinery both for treating quartz and alluvial, but it will not be at work until March."

"What is the nature of the ore, and the average yield per ton?"

"All the ore hitherto discovered has been exceedingly friable free milling ore. In most claims the gold is disseminated finely throughout the stone. It is impossible to give an average. Some stone from Lord Percy Douglas' claim showing no gold proved on assay in London to contain nearly 46 ounces to the ton, and the quartz at grass at Bayley's is expected to yield at least 20 ounces to the ton."

"What do people on the other side the Atlantic think of the field?"

"They are convinced of its value. The market value of Bayley's in the Colonies is nearly £500,000. Very many claims have been bought by syndicates formed in Adelaide, Melbourne, and Sydney, after inspection by experts. Mr. McCulloch, one of the first discoverers of Broken Hill, and now Chairman of the Broken Hill Company, was one of the first to recognise its value and I believe it was he who found some of the money to purchase 'Bayley's Reward Claim.' I hear he has had his capital back three times over, but he is in London and can no doubt be interviewed."

"Is it true, as has been reported, that the gold-bearing stone is likely to pinch out?"

"I never heard of it. Any report to that effect must be mere conjecture. The reef has not pinched in Bayley's, but is keeping a uniform width of 6 to 7 feet."

"Is it a promising field, then, for engineers, miners, and mining machinery?"

"In my judgment certainly it is for competent men prepared to work. I do not think there is an opening for 'kidgloved experts,' who expect to get thousand guinea fees. The colonists want to see something substantial for their money."

"Would you advise anyone to go out there on 'spec'?"

"Yes, if supplied with capital and capable of forming an opinion of the value of a reef from his own personal, practical experience, or if advised by a thoroughly practical and trustworthy minor, many of whom are available."

"How are you treated by the Government?"

"Very fairly; but the Government mining laws are very stringent, and for this reason I have taken up claims on land redeemed from the operations of the Mining Act, but there is only one block of ground which has been so redeemed, and it

cannot be done in future, as the land was taken up previous to the discovery of gold in the district."

"Are you in need of capital?"

"Most of the available ground on Government land at Coolgardie has been taken up, but the capital to develop the claims is still wanting. The difficulty is that the owners now want high prices for their claims."

"Does the field offer great inducement to investment, as apart from speculation?"

"This all depends on the price given for the claim."

"What are the facilities for transportation?"

"A railway to within 112 miles of Coolgardie will be opened in April next, but it will probably be continued right on before long. There is a level road from the railway to-day. Transport is also carried on by wagons, camels, &c., so that at present it is easier of access than Johannesburg."

"What is the average cost of treating the ore?"

"It is impossible to give a correct idea, but it is probably now about 30s. per ton."

"Which do you consider the most promising mine on the field?"

"Of course Bayley's to-day, but those on the Premier reef probably come next of the properties already opened up, but I do not think I am too sanguine in saying that I believe I have secured some equal to the best after Bayley's."

"Do you consider the laws unjust?"

"Stringent, but not unjust. They, however, act hardly on people without capital."

The Yilgarn Goldfield.

"Is the Yilgarn gold field a promising field?"

"Yes, certainly. The Yilgarn field to the end of 1892 had produced 33,562 ounces of gold, an average of 1 ounce 0 dwts. 11 grains per ton of ore crushed, being about double the average of the Witwatersrand. I am strongly of opinion, however, that a large percentage is lost in the tailings."

"What is the size of the field?"

"It is one of the largest gold fields of Western Australia, being 13,000 square miles, and chiefly consists of three divisions—viz., Golden Valley, Parker's Range, and Southern Cross, extending over an area proclaimed at 13,000 square miles. The Yilgarn Hills consist of a low range, about 250 miles east of Perth, on the western side of a series of salt lakes, of which Lake Deborah is the southernmost. They run for the most part north and south, their width ranging from two to three miles. On the eastern side they extend, with gradual declivity, towards the lakes, being separated therefrom by a plain, four to six miles wide, consisting of red clay strewn with ironstone and quartz."

"What is the nature of the rocks?"

"The rocks are mica schist, mica slate, and flaggy quartzite, with many diorites and quartz veins. They have been tilted up from the west by a large mass of intrusive granite, which forms a rough face on the western side of the northern hills, and is again seen in the southern part, appearing above the plain in huge rounded masses. The quartz reefs follow the strike of the rocks, and show great variety of character, the white quartz being less clearly defined, and in smaller masses than the more ferruginous reefs. 'Yilgarn' is the native name for white quartz."

"When was gold first discovered here?"

"In the year 1887."

"Is the stone rich, free milling, and good for amalgamation?"

"It is all free gold. The stone is rich, and often contains 6 ounces to the ton."

"How are you off for water?"

"Unfortunately, it is rather scarce, and a serious obstacle to progress. Plenty of brackish water is, however, obtained, and by the use of condensers is made available."

"On the whole, what are the facilities for working?"

"Excellent."

"What is its distance from Coolgardie and Perth?"

"It is about 112 miles from the former and 240 from the latter place."

"Speaking of Southern Cross, can you give me any particulars respecting it?"

"Oh! yes. The reefs run more or less north and south, and it would appear that there are three lines of true lodes—one white, one ferruginous, and one mullocky, with quartz leaders—and one series of cross courses. These true lodes probably owe their formation to the upheaval which has occurred on the eastern and western sides of this area, to which they run parallel, while the cross courses are due to a later intrusion of granite, masses of which appear as bare separate hills. The country is of slight elevation, consisting of low, thickly-timbered hills, flats, and claypans or lakes. The reefs generally appear on the low ridges, but in some cases they are visible on the edges of the lakes. The rocks are chiefly hornblende schists, but micaceous, chloritic, and talcose schists occur, while both to the east and west metamorphic and intrusive granites appear, trap dykes being occasionally found."

The Murchison Goldfield.

"Is the Murchison Range considered a promising and permanent gold field?"

"There is no question as to this. It is richer than Yilgarn in the opinion of experts, though not equal to Coolgardie, which is phenomenal."

"Where is it situated?"

"About 200 miles east of Gauthaune Bay. It has an area of 32,000 square miles, and was proclaimed after a discovery by John Connelly. The principal auriferous belt is to the eastward. It runs in a north and south direction, from West Mount Magnet to Austen's Lake, and then in a north-easterly direction to Lake Annear and Yaga-hong."

"What is the average value of the quartz?"

"It is hardly sufficiently advanced to say. I am interested in the Star of the East Mine, which is at present averaging 5 ounces to the ton, being one of the richest mines in the locality. I should say the average per ton crushed would be over 2 ounces."

"Is the stone easy of treatment?"

"It is free gold in nearly every case."

"When was it discovered?"

"It was proclaimed in September, 1891, and the first 11 months output was £90,000, of course, without machinery."

Other promising Goldfields.

"What other gold fields are there, with which you have made acquaintance?"

"The Pilbarra field promises well. It has a proclaimed area of 32,000 square miles. The territory consists of a low alluvial plain, following the line of coast, broken by rocky hills, and rising to a high table-land on the south and east. This large district is intersected by streams, which abound in agates, calcite, crystals, and other precious stones, and its reefs are exceedingly rich in gold. On the Shaw was found the 'Little Hero' nugget, weighing 233 ounces 8 dwts. Then there are the Kimberley gold fields, situated in an auriferous country, extending in a north-east and south-west direction for a distance of 250 miles from Mount Cecil. Its proclaimed area is 47,000 square miles. There are numerous richly productive reefs throughout this district, which can in many cases be traced on the surface for con-

siderable distances. The quartz has yielded a high average of gold, and taking into consideration the well-defined character of the lodes, their comparatively shallow depth, and the good supply of wood and water, in spite of its remoteness, it may be predicted that this will yet be one of the most important reefing districts in Australia."

"Do you know anything of the Dundas Goldfield?"
"Oh, yes. I know that the reefs here are pretty numerous and well-defined."

OTHER VIEWS OF COOLGARDIE.

In connection with this, it would not be out of place to reproduce from the *Australian Mining Standard* the views of Mr. George Gorrie, an old Victorian miner, and one of the promoters of Bayley's Reward No. 1 South. Mr. Gorrie was at Southern Cross for some time prior to the discovery of Coolgardie, and on Bayley's declaration of the find, left for the new field, and was one of the first arrivals.

In an interview with a representative of our Australian contemporary, Mr. Gorrie said:—"The reef in Bayley's Reward goes on developing very promisingly. So far as they can see there is no end of gold. Both north and south an enormously rich shoot of gold extends without any diminution so far. When I left Coolgardie one shaft was 55 feet deep on the course of the lode, and gold at the bottom was quite as rich as near the surface. The main shaft is some 200 feet east of the lode; it is 10 feet by 4 feet, well timbered with sawn timber, and in this they anticipate that they will cut the lode at 300 feet. In this shaft also they struck water at 94 feet, and the inflow of water at 154 feet was 400 gallons per hour. They have already taken out about 13,000 ounces of gold from 11 tons of stuff; and they have 1000 tons at grass, which I feel certain will go 20 ounces to the ton, straight from the stamps. You know Bayley's management refuse to treat anything that won't go a pennyweight to the pound of quartz. For obvious reasons their machinery is of the simplest description—a 4 horse-power kerosene engine, which drives a panklast and pan. Already they have paid 22s. 6d. per share in dividends."

"I was one of the first men on the ground after the report of the discovery. I was much struck by the first appearance of the field—gold everywhere lying about—and I told Warden Finerty that I thought the thing would be permanent. It was in September last year that I took up the 18 acres that is now the No. 1 South; I applied for the lease in October, when the warden came; and with Harry Baker, T. Talbot, and Fred Fosser I worked along until February 1, when on account of the scarcity of water we got an exemption. We only had a wind-lash, which I made myself. The first discovery we made was a reef on the surface, running parallel with Bayley's Reward and 400 feet west of the supposed line of Bayley's. We opened this up by a trench, about 100 feet long and 6 feet deep, with two shafts about 20 feet and 12 feet. We also opened up the lode at different points towards the southern boundary trenching some 600 feet across the ridge where a lead of alluvial gold had previously been found, and we then discovered several good payable leaders. On Bayley's boundary we sunk a shaft 40 feet deep; but when this was started we did not know which way Bayley's lode was underlying, as it was not at that time opened up. I was under the belief that Bayley's reef was underlying to the west, but we afterwards discovered that it went east. On this account we discontinued work in that shaft. We then started to work on a new shaft 40 feet east and south of the old one, and struck Bayley's reef. This is where the rich gold was discovered after I left Coolgardie. Some specimens obtained from this shaft on Bayley's boundary are now on their way to Melbourne."

"Yes, I think Coolgardie has a big future. I have very little doubt but that it will be a permanent reefing field. The lodes are wide and well-defined, so far as at present opened up. The stone carries a considerable amount of iron and some specks of galena, but it is very free indeed of the baser metals, and good for amalgamation—that is, towards the surface. Below the water level, I believe, it will be found to be a dense iron lode. The stone is not at all patchy, the gold being regularly distributed. In Bayley's the lode is 7 feet in width. The western lode we have is between 3 feet and 4 feet. It is almost impossible at present to say what is the area of the gold-bearing country in the district around Coolgardie. The place has not yet been thoroughly prospected. Men had to carry water and provisions, so they could not thoroughly prospect except within a radius of three or four miles. Amongst the most favourable shows on the field are No. 6, lease, held by Galle, and another lease held by Lyons and Duggan. Alluvial gold has been found all over the surface, and our western reef traverses No. 6. Four or five miles away there are some good shows, with indications of permanent lodes. But I say a man ought to hesitate before starting for Coolgardie. There are more men there now than can be supplied with water and provisions during the summer. I am very much afraid that the water on the track between Southern Cross and Coolgardie will give out. Even if they got a supply on the field and the water on the track gives out, how are provisions to be got there? A man has great privations to put up with; water and everything else is sold at famine rates. There is a baker on the field, and fresh mutton is sometimes available; but at Hannan's there is nothing but tinned meat and damper. Finally, I would advise every man who has not at least £100 on his arrival in Western Australia to give Coolgardie a wide berth for the present."

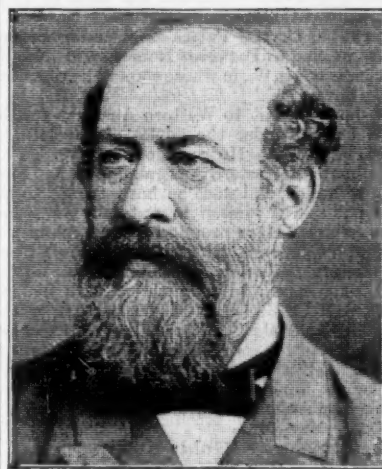
CURIOUS FACTS ABOUT RAILWAY RAILS.—If a railway consists of a single line, so that as many trains go north as south, the rails will wear out equally. But if there is a double line of rails, then on the line on which the trains travel from south to north the eastern rail would theoretically wear out first, and on the other line the western rail. For a train starting, say from the south, will have a certain velocity round the earth owing to the earth's revolving round its axis from west to east. The farther north a train gets the slower does this velocity from west to east become. The force applied to retard this velocity is applied to the flanges of the carriage wheels by the eastern rail, the friction on this rail will consequently be the greater, and, theoretically, it ought to wear out first. Similarly, on the other line, the western rail applies the pressure needed to accelerate the speed of the train from west to east. On calculating out the pressure needed to alter this velocity over a hundred yards of rail it is found to be a negligible quantity. So that, practically, the rails will wear away at the same rate. The smaller pressure on the western rail also causes it to "creep" or draw southward, faster than the eastward one.—*Pearson's Weekly*.

THE MASHONLAND GOLD FIELDS.—Speaking at the annual dinner of the Oldham Incorporated Chamber of Commerce Mr. Archibald R. Colquhoun, the first administrator of Mashonaland, said the future development of that country absolutely depended upon the gold industry, which would bring together the primary essentials—white settlers and capital. The gold farms were in some places very extensive, but they could not be said to be in any sense developed at present. When the stage of regular mining was reached there was no reason why Mashonaland should not take an important place as a mining country. The two desiderata for the development of the gold industry were efficient native labour and transport. The Mashonas for labour purposes could not be counted upon, but the Matabele would furnish us with excellent labour supply.

PARS. ABOUT PEOPLE

IN THE MINING, RAILWAY, ENGINEERING, FINANCIAL, AND INDUSTRIAL WORLDS.

THE latest of our Colonies to establish an Agency General in London is Natal; and on Thursday week the new Agent-General (Mr. Walter Peace, C.M.G., F.S.S.), inaugurated the establishment of the agency by giving a dinner at the offices, Princes Mansions, Westminster. A goodly company assembled to do honour to the occasion, including



WALTER PEACE, ESQ., C.M.G., F.S.S.,
Agent-General for Natal.

The new Agent-General, Mr. Walter Peace, has acted as official emigration agent for the Natal Government since 1880. Mr. Peace, who is a Scotchman by birth, and an excellent specimen of the good colonist which the Scotchman ordinarily makes, has had an extensive experience of life in Natal. In 1863 he commenced in business as a merchant in Durban, and was head of the important firm of Peace, Blandy, and Co. until 1879. From 1870 to 1879 he acted as Belgian Consul in Natal, and for his services in this capacity was created *Chevalier de l'Ordre de Leopold*. He became London agent for the Natal Harbour in 1881. He is the author of *Our Colony of Natal*, and, probably, there is no man in this country who knows the colony more thoroughly than Mr. Peace. He holds a very high opinion of its resources and possibilities, and of its future as a producer of coal—a branch of mining industry which is new to Natal, but which is now being actively developed. An interesting exhibit of Natal coal attracted, it may be remembered, a good deal of attention at the International Exhibition of Mining and Metallurgy held in the Crystal Palace in 1890; and the Natal public had every reason then to thank Mr. Peace for the energy and enterprise he evinced in securing the proper representation at the exhibition of what promises to become an important source of wealth and prosperity to the colony.

Mr. HUGH MIDDLETON writes to us denying the purport of Mr. Collins's letter in these columns last week denying that the former had been appointed Chief Geologist to the Government of Afghanistan, and in common fairness we feel bound to publish his (Mr. Middleton's) letter.

MR. MIDDLETON writes:—

In reference to your paragraph inserted last week at the instance of Mr. Collins, I do not propose to argue the question of my precise status while his assistant. If a reference were made to Mr. T. A. Martin, of Calcutta, the mercantile agent to the Ameer, and with whom my original appointment was made, I should be entirely confirmed. I am more concerned, however, as to Mr. Collins's statement that I never was chief geologist and mining engineer to the Government of Afghanistan. I beg to say that Mr. Collins had written instructions to hand over to me all apparatus, &c., appertaining to his office on May 19th, 1893, and that he then resigned his position, and that I was thereupon appointed his successor, and held the above appointment till my own resignation.

Mr. T. S. Pyne and Mr. Frank H. Clemence, the only gentlemen in the service of the Ameer who can possibly know the facts, who are now in London, fully confirm this statement. Perhaps Mr. Collins will now withdraw an altogether unwarrantable statement. I cannot understand what he means by saying that a somewhat similar statement was unsuccessfully put forward once before. I have sufficient evidence to substantiate the whole of my statements, and I withdraw nothing that has appeared in print.

We have learnt with regret, in which we feel assured many of our readers will share, of the decease of Mr. Henry Bowes Scott, widely known as a partner in the firms of Bowes Scott and Read, and Bowes Scott and Western. The deceased was a son of the late Major-General Scott, C.B., R.E. F.R.S., the well-known designer of the Royal Albert Hall, and devoted his life to engineering pursuits. He was not only well known as an authority in sanitary engineering, but was practically one of the first pioneers of electrical lighting, although he subsequently became mainly identified with mechanical engineering. Mr. Bowes Scott was to a great extent instrumental in introducing Rogers Field's Automatic Siphon to public notice, by means of which the health of the larger centres of population was much improved, and his genial and popular presence will be widely missed in engineering circles. He married in 1879 a daughter of the late Colonel Sir Hugh Owen, Bart., A.D.C. to the Queen, by whom he leaves a son and two daughters.

ONE of the pioneers of West Hartlepool passed away on Wednesday in the person of Mr. George Mitchell, who expired, at the ripe age of 72, at his residence, York-road, after a long illness. Mr. Mitchell was born at Haydon Bridge, in Northumberland, and early in life served under Mr. W. Hutchinson, contractor, in the formation of the Newcastle and Carlisle Railway. The turning point of his fortune was the excavation and completion of the first of the West Hartlepool docks, commenced in 1845, from which time, up to his death, he resided in that town. On his own account he had the contract for the Cleveland Railway, the banking of the Tees from Tod Point to Cargo Fleet, the widening of that river at Stockton, the doubling of the line from Kellash to Kirby Stephen, and the deepening of the West Hartlepool timber ponds. He leaves a widow and two sons.

A WONDERFUL INVENTION is one which, whilst being useful to the world, has hardly before been dreamt of by scientific men. Many astonishing proposals have frequently been made with reference to a revolution in our already rapid means of locomotion, but nothing practical has yet been effected. No doubt the time will come when a trip between London and New York will seem like a pleasant excursion of a few hours' duration. The ingenuity of man can accomplish wonders and there is no telling when its limit will be reached. It will be difficult, however, to produce anything more wonderful than Holway's Pills and Ointment. As sterling remedies for all complaints nothing can equal them.

MEETINGS OF MINING COMPANIES.

DOLCOATH.

A dividend of 5s. per share.

THE adventurers in Dolcoath held a 12 weeks' meeting at the mine on Tuesday, the chair being occupied by Mr. MICHAEL H. WILLIAMS.

The accounts showed:—Labour costs, £12,448; tribute, £1520; merchant's bill, £5592; Camborne and Illogan parish rate, £347; three months' stannary dues, £24; South Devon Hospital, £10 10s.; and bankers' charges (six months), £53, making the total expenditure £19,997. On the assets' side 475 tons 17 cwt. 3 qrs. 3 lbs. of black tin (at an average of £45 9s. per ton) had realised, less £1201 dues, £20,426; extra carriage, £65; discounts, £24 18s.; tribute debts, £14; making the total receipts £20,530, and showing a profit of £533 2s. 9d. on the 12 weeks, a balance of £4669 remaining in favour of the mine.

Captains J. Thomas, J. Johns, E. Prideaux, G. Davey, and W. James, the company's agents, submitted the following report:—

At the engine shaft we have cut a cistern plot at the 425 and fixed a new plunger lift, so that we hope to be able to go on sinking continuously by two boring machines. The shaft is being sunk on the north part of the lode, which produces tinstuff of low quality, and is now 5 fathoms below the 425 fathom level. The south part of the lode, which we reported as being worth £40 per cubic fathom at the 425 is standing to the south of the shaft. The 425 west of Old Sump shaft is worth £10 per fathom. There is no level driven more than 20 fathoms west of Old Sump below the 375 fathom level, which is communicated with Harriett's shaft. In cutting south at the 375 about 71 fathoms west of Old Sump we find the lode to be worth £20 per fathom. We propose therefore to continue the driving of the 425 west by boring machine to prove this large piece of unexplored ground. The 425 east of new east has been holed to No. 1 winze under the 412 since the last account and the ground at this point is laid open for stopping. In the 425 east of No. 1 winze the lode is worth for 6 feet wide £100 per fathom. The 412 west of Old Sump is worth £12 per fathom. The 412 east of new east is worth £20 per fathom. The eastern shaft is sunk 4½ fathoms under the 420 fathom level. This shaft is in granite a few fathoms to the north of the lode. We are sinking this shaft and driving the 412 east by boring machines. The 318 west of Harriett's shaft is worth £10 per fathom. The 314 west of Harriett's shaft is producing tinstuff of low quality. The 327 west of eastern shaft on the main lode having been ventilated by the crosscut from that level to the winze under the 322 on the south lode we have commenced to sink a winze under the 327 where the lode is worth for 9 feet long £60 per fathom. The lode in the eastern part of the mine is standing unexplored between the 327 and the 375 for about 100 fathoms in length. The 322 which is being driven west of eastern shaft is producing a little tin, and is improving in appearance. This end is 15 fathoms short of the rich lode met with in the 327.—South lode: The 675 west of Harriett's shaft is producing a little tin. The principal part of the lode is probably standing to the south, and we are now driving in that direction. The 388 west of Harriett's is producing low quality tinstuff. The 275 west of Old Sump is worth £10 per fathom. The 268 west of Old Sump is worth £15 per fathom. The 254 west of Old Sump is worth £20 per fathom. The 242 west of Old Sump is worth £3 per fathom. The 220 east of crosscut south of engine shaft is worth £10 per fathom. Owing to the unfortunate accident at the 412 east of new east shaft, we have been obliged to suspend all the rich stopes over the 42, in connection with the "run" during the past three months. We shall be able to work this ground again with safety as soon as it is made secure above the 400 fathoms level. We shall now be opening up a large quantity of even richer ground at the 425 fathom level east of new east.

Captain JOSHUA THOMAS regretted that in many respects the past quarter had been an unfavourable one. In the first place, as would be seen from the last paragraph of the report, the returns of tin had been lessened to a serious extent owing to the fact that the rich ground had remained idle during the whole of the quarter. Before the run took place they had been raising over 60 tons of tin per month in the stopes above 412 east of east, but since the run and the collapse of the big stall it had been impossible to work those stopes without imminent danger to human life, and they dared not run that risk. (Hear, hear.) It was impossible to work those stopes until the ground was thoroughly secured above the 400. They would understand that the workings there were very large—between 30 and 40 feet—and the work of securing and making them safe was a very tedious business. At the present time they were engaged in timbering the 400, and after its completion they would be able to resume with safety the working of these stopes, so that the rich tin ground in that part of the mine was not lost but only delayed in breaking for the time being. Before that unfortunate run they had calculated on maintaining their returns until the rich ground in the 425 was reached. These calculations were, however, unfortunately upset by the calamity to which he had referred. For years they had been singularly free from serious accident and had been able to congratulate themselves upon a period of prosperity probably unparalleled in the history of Cornish mining, and if for a few months they might have to encounter some reverses, it was at least satisfactory to remember that the mine exhibited no signs of failing, but was looking as well as ever. The falling off in the returns could only be of a temporary character. They had now reached the rich tin ground in the 425 east of new east, and the No. 1 winze was now worth £100 per fathom for 6 feet wide. This end was still 20 fathoms short of No. 2 winze, where they had the richest tin ground the mine had ever known, 6 feet wide, and worth £600 per fathom. That ground was, of course, all standing ahead of them. The engine shaft was also sunk 5 fathoms below the 425, and considering that they had not taken away any or scarcely any ground from the 412 to the 425, the shaft was now in a more forward state than it had been for many years. In six months they would get down to another level and drive east and west again 12 or 15 fathoms deeper than the 425. In a few months' time the eastern shaft would probably be holed to the 412. Already it was down 4½ fathoms and they were driving the 412 rapidly towards it. Some very rich tin ground was being opened on the main lode at the 327 which was about 30 fathoms to the west of the eastern shaft. The lode there was worth £60 per fathom, and there was nothing intervening between that and the 375. When the winze was sunk a few fathoms and the underlie of the lode found it was proposed to start another level from the engine shaft, probably at about the 350, in order to come back under the winze and lay open the rich tin ground for stopping. While, owing to unforeseen circumstances the hitherto successful working of the mine had been temporarily suspended, the prospects of the future were quite as bright and promising as they had ever been. Labour costs had been considerably reduced to meet the lessening returns of tin, but when they did that they did not know that the price of tin was going down so much. The price this quarter as compared with the last was £3 7s. per ton less, which took off no less than £1660 from the receipts. Even with the lessened returns they would have been able to pay a 10s. dividend had tin remained at its former price. This circumstance was, however, beyond their control. The present state of the tin market was inexplicable. Notwithstanding the dulness of general trade and the small quantities America had taken, statistics showed that the stocks had decreased by 300 tons in the past year, and why tin should have fallen nearly £20 in the face of such statistics was an incomprehensible mystery. It was worth considering whether it was a wise policy to raise large quantities of tin at its present price. Were the mine his own he should know what to do; but as that was not the case the shareholders themselves should consider what was to be done. Calls were now being made in some Cornish mines, and they must continue if the present low price of tin prevailed, and no doubt some shareholders were glad to get dividends—though small ones. That matter would have to be talked over with the committee, and he must see what was to be done. No doubt they would be able to give very fair profits even in the present low price of tin. (Applause.)

The CHAIRMAN, in proposing the adoption of the accounts, deplored the melancholy state of things which prevailed in returning so large an amount of tin with so small a profit. The patient was sick almost unto death, and the doctor had unfortunately run away from them. (Laughter.) The silver question—one of the most important ones of the day—had defied the skill of the cleverest financiers of the day. The ablest men in the world had discussed it without arriving at any satisfactory result. Some thought that

when President Cleveland took office in the United States that he would settle the silver question, and that there would be an end of the system of protection, but Mr. Cleveland found that he had a very strong opposition to contend against, and the present position in the States seemed to him to be a very "shaky" one. The Indian mints had been closed by the Government, but they were no further forward than before. Much had been said about the stopping of the American silver mines owing to the low price, but his own opinion was that brother Jonathan, if he could not get ten shillings, would be content with five, and he therefore anticipated that any of the mines would be stopped, did not, however, a bright side to the question. Gold was in there, Africa was being opened up and was full of gold. The past year's imports of gold from Africa were more than double, and from recent events which had taken place there, it seemed we shall find gold the same as in the mines of India, and that things would find their level in time. Referring again to silver Mr. Williams said that all the Governments of the world were armed to the teeth, and were taxing people up to the hilt, to get money to keep up those great armies. There was ground for apprehending that the bubble would soon burst and that there would then be a great war which would have an adverse influence upon trade. With regard to tin the production of it in the Straits was increasing and large quantities of it were going to America. After the enormous stocks which had accumulated there had been cleared off, there might be a better demand, but, speaking for himself, he had personally small hopes of any improvement until the question of silver came to a final settlement.

Mr. J. WICKETT seconded the resolution, which was carried unanimously.

The CHAIRMAN said it was for the shareholders to decide what was to be done with the profit of £533, and the available balance of £4469. There was a recommendation from the committee that a dividend of 5s. per share should be declared, which would leave a balance of £3494 to be carried forward. The report of Captain Thomas was a most excellent one, and had induced the committee to think they could safely make that recommendation.

Captain THOMAS considered the proposal of the committee to declare a dividend a perfectly safe one.

Mr. RABLING, J.P., seconded the motion.

Mr. BAIN, J.P., commended the wise discretion of the committee which was peculiarly useful in view of the fact that some of the shareholders were wholly dependent upon the dividends of the mine.

The motion was then put and carried.

Mr. WICKETT then proposed a vote of thanks to the committee and agents of the mine, and in doing so, expressed the hope that the present year would be better than the last one, there being certainly room for improvement.

The motion was duly seconded and carried.

The proceedings then terminated in the usual manner.

WHEEL BASSET MINE.

Call of 3s. 4d. per share.

A 13-weekly meeting of the adventurers was held on the mine on Tuesday, under the presidency of Mr. W. McKEAND.

The accounts showed:—Debits—Labour pay, £3894; 1950 tons of coal and carriage, £1266; other supplies, £780; committee's expenses, £5; plans, £6; stannary assessment, £5; bank charges, £36; total debits, £5994 7s. 11d. Credits—108 tons of tin sold realised £4797; extra carriage, £2; discounts, £56; tin leavings, £26; spare materials, &c., £21. The credits totalled £4904 15s., leaving a loss on the 13 weeks' working of £1089 12s. 11d.

The committee reported as follows:—

The quarter's working is again disappointing owing to the continued reduction in the price of tin. We have returned 3½ tons less than in the previous quarter. The quantity of tinstone stamped has been 5380 tons as against 6961 tons for the previous quarter. The new slime floors have cost about £250 and are now nearly completed. 7 tons 15 cwt. of slime tin has been returned during the quarter, amounting to £250 10s., and we hope to have an increase from this source in the coming quarter. The labour pay has decreased by £275 5s. 11d., which is due to a general reduction throughout the mine. Our coal bill is £231 18s. 10d., less than the previous quarter and our merchants' bills £439 less. The average produce of tinstuff is 37½ lbs. against 36 lbs. in the quarter ending September. The loss is chiefly due to the depreciation in the price of tin and the extension of the slime floors. The committee regret to have to recommend a call of 3s. 4d. per share to meet the loss and would point out that even with tin at the price realised 12 months since—viz., £52 2s. 6d., no loss would have resulted.

The agents (Captains W. James, C. Clemens, and James Andrew) reported as follows:—

The crosscut driving south of the new lode at the 230 fathom level, is driving by boring machinery at £9 10s. per fathom. The crosscut is now in the capies of the flat lode; we hope to get into the productive part of the lode in a month's time. The 230 end east of main crosscut on south lode is driving by boring machinery at £9 10s. per fathom. Lode worth £25 per fathom. This lode is 25 fathoms south of the flat lode; being near perpendicular, it will junction with the flat lode about 20 fathoms below the 230 level. The 231 end west of main crosscut on south lode is driving at £7 10s. per fathom, producing stamping work. The 230 end east on flat lode is driving at £7 10s. per fathom. Lode is poor at present. A winze sinking below the 230 level on flat lode is worth £50 per fathom, sinking at £10 per cubic fathom. A winze sinking below the 230 level on middle lode is sinking at £8 10s. per fathom. This lode will junction with the flat lode about 10 fathoms below the 230 level, where we expect to find large deposits of tin. A stop working at the 230 level, is worth £12 per fathom; stopping at 3s. per ton. A stop working in the back of the 230 level is worth £15 per fathom; stopping at 3s. 6d. per ton. A stop working in the back of the 230 level is worth £16 per fathom; stopping at 3s. 3d. per ton. The 220 level east of winze is driving by boring machinery at £8 per fathom; lode worth £12 per fathom. The 220 end west of winze is worth £10 per fathom; driving at £7 per fathom. A rise in the back of the 220 level is worth £10 per fathom; rising at £7 10s. per fathom. A stop working in the bottom of the 220 level is worth £8 per fathom; stopping at £3 10s. per fathom. A stop working in the back of the 180 level is worth £7 per fathom; stopping at 3s. 6d. per ton. The 170 end west of Grace's shaft is driving at £8 10s. per fathom; the lode is poor at present. A stop working in the bottom of the 170 level is worth £12 per fathom; stopping at 3s. 9d. per ton. A stop working in the back of the 170 level is worth £8 per fathom; stopping at 3s. per ton. A stop working in the bottom of the 160 level is worth £9 per fathom, stopping at 2s. 6d. per ton. We have 121 men working on the mine; also nine pitches working on tribute by 21 men, tributes varying from 10s. to 12s. in the £. Total employed in every department: underground including shaftmen, timbermen, trimmers, and filers, 153 men.—Surface Operations: Since our last meeting we have erected five more new round frames with buildings complete; three of these frames are already working, the other three will be ready for working in a few days. We shall then be in a position to deal with all of our slimes in an efficient and economical manner. We regret to have to show such a heavy loss on the quarter's working. Although we have reduced our working expenses considerably we have been unable with the present low price of tin and the extra outlay on our dressing floors to meet our expenditure. Seeing we have two lodes to the south of the flat lode which will junction with the flat lode in about 30 fathoms sinking we consider our prospects never looked brighter in the bottom of the mine than they do at present.

The CHAIRMAN, in proposing the adoption of the accounts, said the committee deeply regretted meeting them again with a loss. They could rest assured everything had been done that possibly could be. They had received £4 10s. 10d. per ton less for their tin during the quarter. He hoped that ere long they would see a better price for the tin. Before he left London a somewhat different feeling existed; people were beginning to invest in various speculations; in America trade was reviving and things were looking better all round. Their total sales during the past year were £3784 less than in 1892, but they well knew that during the last few years they had made no discovery in the mine until the one made six months ago in the bottom. They had got a bunch of mineral down there upwards of 20 fathoms long, which they would be able to profitably take away in a short time—as soon as Captain James got a winze down and had crosscut to the lode.

Mr. SARA seconded the motion, and it was carried.

On the motion of Mr. OLDS, seconded by Mr. BONE, a call of 3s. 4d. per share was made.

The CHAIRMAN proposed:—

That the adventurers of this mine are desirous of conveying to Mr. Basset their congratulations on his coming of age, and trust that he may be long spared to be a popular landlord and have a contented and happy tenancy. They all knew that the Basset family had been a very popular one

in that district, and deservedly so. Perhaps they in Wheel Basset had participated more than any other mine in the liberality of the Basset family.

The motion was duly seconded and carried.

Replying to a vote of thanks to the agents, proposed by Dr. PERMEWAN, Captain JAMES, the manager, pointed out that of the 121 men at work in the mine, 60 were exploring. Now that labour was cheap was the proper time to explore. The 230 south for the last 15 fathom working was valued up to as high as £40 a fathom. The 230 winze in the great lode was down 7 fathoms, and the winze at the same level on the flat lode was worth £50 a fathom. They had opened more paying ground during the last nine months than they did in the four previous years' working. They had fixed a dam to keep out the Wheel Uny water, and had not so much water in Basset this year as last. The tributaries were setting for £44 a ton for tin, at 12s. in the £.

Captain CLEMENS, who also briefly replied, said that if ever Dolcoath had a good bottom they could now say the same of Wheel Basset.

A vote of thanks was accorded the Chairman, which closed the meeting.

PHOENIX AND WEST PHOENIX UNITED.

The proposed Conversion Scheme.—Agreeing to the resolutions.—The Chairman puts his foot down, and discussion is deferred.

[SPECIALLY REPORTED FOR *The Mining Journal*.]

As briefly stated in the telegram from our Cornish correspondent last week, the adventurers in Phoenix and West Phoenix United Mines met at Webb's Hotel, Liskeard, yesterday week, for the purpose of considering resolutions, mentioned in the circular, advised by the directors to be passed as a preliminary step to converting the concern from a Cost Book into a Limited Liability Company. In a memorandum accompanying the circular it was stated that the registration of the Cost Book company did not affect any change whatever in the nature of the company as it at present existed, but that it was necessary that the company should be registered before the provisions of the Companies' Acts, 1862-90 could be made available for carrying out the conversion. The PURSER (Mr. Wm. Polkinghorne) occupied the chair, and there were also present the Rev. J. O. West; Captain Williams, the mine agent; Messrs. J. Chynoweth; A. C. L. Glubb; W. Matthews; B. Bryant; T. F. Hosking; M. W. Bawden; G. Edgcombe; J. Hosking; Major West; A. de C. Glubb; O. Colmer; and W. Charles (financial agent, London), promoter of the proposed conversion scheme.

The CHAIRMAN reported that as the result of the circular sent out requesting approval, or not, of the steps proposed to be taken, with the view of converting the concern into a limited liability company, approvals had been received representing 8689 shares. The proxies received represented 3950 shares, in addition to which there were 3962 shares held by the committee present at the meeting held prior to the general gathering that day, representing in all 7912 shares out of 10,066, or nearly four-fifths of the entire issue. (Applause.) He proposed: "That the Phoenix and West Phoenix United Mines be registered as an unlimited company, under the Companies Acts, 1862-90."

Mr. BRYANT thought that before the resolution was submitted, the shareholders should be made acquainted with some of the details of the proposed conversion scheme. (Hear, hear.) Some people were under the impression that instead of receiving cash for their shares, as stated at the last meeting, they would be merely credited with their value. He wished to know whether or not they were to be paid in cash.

The CHAIRMAN said that the matter had been thoroughly considered by the committee, but it was not a question which formed any part of the business which they were called to discuss. They were asked to pass specific resolutions, details of which had been given in the printed notice issued to all shareholders.

Mr. GLUBB also intimated that the committee were not prepared to give any further information than that contained in the notice referred to by the Chairman.

Mr. BRYANT could not see why an answer should not be given to his question. (Hear, hear.) Mr. Charles, who, he supposed, had framed the financial details, could surely reply.

The CHAIRMAN again repeated that the object for which they met was fully explained in the papers sent to the shareholders. It was not the time for discussing the question raised by Mr. Bryant. That confidence was felt in the committee was shown by the numerous approvals received. (Hear, hear.)

Mr. MATHEWS pointed out that the passing of the resolutions would not make any difference in the position of the company. They were simply asked to take steps which were necessary before they could form themselves into a Limited Liability company. (Hear, hear.) By adopting those resolutions they would not commit themselves to anything.

Mr. BRYANT reminded the committee that at the last meeting they were told that nothing would be done without consulting the shareholders. They had to consider whether they ought to form a company unless they had some guarantee that the scheme would be carried out.

The CHAIRMAN still held that the questions were irrelevant to the object for which the meeting was called. He had no doubt that satisfactory explanations would be given, and that the shareholders would approve of what the committee were doing. At the same time they were not prepared to advertise what they were doing.

Mr. CHYNOWETH, as a business man, did not think that Mr. Bryant had asked an unreasonable question. They were asked to vote on a subject about which they knew nothing. Scores were in the same position as himself—in a fog. (A laugh.)

The CHAIRMAN observed that the committee were very well satisfied so far as the negotiations had gone, but the time was not ripe for them to disclose what had taken place. They were not met for discussion, but for the purpose of obtaining leave to take steps which would enable them to subsequently form themselves into a Limited company.

Mr. COLMER said the steps they were asked to take were absolutely necessary if they desired to be registered as a limited company. The matter had been carefully gone into, and from enquiries he had made he believed very little expense would be attached to the carrying out of the resolutions. Of course, in the event of their becoming a registered company some little cost would be incurred.

The CHAIRMAN mentioned that if a prospectus was drafted it would contain full particulars of their property.

Mr. GLUBB remarked that they were not asked at the present time to take a step of any importance. They would be a Cost-book company just as before, but if they wished to make use of the Companies' Acts they must become a registered Cost-book company. It was a perfectly harmless step.

Mr. BRYANT thought the proposals made at the last meeting most satisfactory. Therefore, he thought there was no harm in asking for certain explanations of Mr. Charles, whose scheme, he presumed, had been approved of by the committee.

Mr. CHARLES replied that he was a shareholder as well as "Mr. Charles." He wished to point out that the passing of the resolutions would not prevent a shareholder from discussing the scheme at a future time. The question put by Mr. Bryant, however, had no reference to the agenda, and it was not, therefore, pertinent to the meeting. A chance for discussion would be given later on.

Mr. CHYNOWETH said he was satisfied with the explanation given by Mr. Glubb, and seconded the resolution, which was carried unanimously.

The CHAIRMAN next proposed: "That William Polkinghorne, of Liskeard, and Captain John Williams, of Linkinhorne, be authorised to make all applications, sign all papers, and make all declarations or affidavits, necessary for giving effect to the preceding resolution."

In answer to Mr. EDGCOMBE, who asked if it was necessary to pass the resolution,

The CHAIRMAN said they were advised that it was necessary.

The motion was then put and carried, and the meeting terminated.

THE MAIN REEF GOLD MINING COMPANY, LIMITED.

An improved position of affairs.

The annual general meeting of the Main Reef Gold Mining Company (Limited) was held on Monday, 18th December, 1893, in Bettelheim buildings, Johannesburg, Mr. F. MOSENTHAL presiding.

The directors' reports and accounts were submitted.

The CHAIRMAN said that before moving the adoption of the report and balance sheet he wished to make some remarks, which, however, would be very brief, as the whole position of the company had been explained by the Chairman (Mr. Hanau) at a meeting held on the 18th of October, and a report of the proceedings at that meeting, together with Mr. Hanau's remarks, had been printed and sent to every shareholder some time before. As the present report and statement of accounts only extended to the end of October, it would be hardly necessary for him to add anything to what had been said at the last special meeting, if it were not for the fact that at that meeting it was resolved to reconstruct the company, and in addition, to give the shareholders an option of taking up additional capital. This option extended to the 15th February of next year, and under the circumstances he thought it was only right that the directors should take every opportunity of keeping the shareholders well posted as to the position of the company. He would, therefore, confine his remarks to the position of the company in so far as it was altered since the last meeting. At the meeting it was stated that the company owed £14,000; and a further sum of £20,000 would be required on the 1st March next in order to put the company in a position to resume crushing, and to fully equip the property. So far as the board could see, however, the whole of that money would not be wanted. They were nearly certain that the sum of £20,000 would be fully sufficient. The position of the property had altered in one respect, viz., that the western portion of the mine had been proved to be better than it was at the time of the meeting when the reconstruction scheme was proposed. The assays since then showed that the ore at that portion of the mine was better than had been expected. The assays of the ore from the eastern portion had also proved fully up to expectations. They could now be certain that at the end of February, when they proposed to recommence crushing operations, the company would not be in debt, but would very likely have some cash in hand; of course it was impossible to say how much. In addition 22,500 reserve shares would be at the disposal of the company, which were under option at par. They would have at least—and he thought he was well within the limit—sufficient ore at their disposal to keep the 30 stamp battery going for four months. This ore had been carefully examined by their manager and consulting engineer, and from the assays taken their joint opinion was to the effect that calculating the width of the reef to be taken out, the ore would go fully 10 dwts. over the plates. That yield might be exceeded, but at any rate from the joint opinion of the manager and consulting engineer it would not be less. By that time the mine would be fully developed, and it was to be expected that as much ore as had been crushed would have been taken out of the mine, so that if nothing unforeseen should happen they would always have a reserve of four months' ore in hand. It rested now with the shareholders to say if they would avail themselves of the option of taking up the shares at par. They were fully entitled to do so, and the facts stated could be fully relied upon. There was one thing he had forgotten to mention—viz., that the income from the company's estate, independent altogether of the mine, amounted last year to £3500; and very likely would reach a similar figure next year. The Chairman concluded by moving the adoption of the report and accounts.

Mr. DETTELBACH seconded the resolution which was carried without dissent.

The proceedings then terminated with a vote of thanks to the Chairman.

VILLAGE MAIN REEF GOLD MINING COMPANY, LIMITED.

Capital to be increased £48,000.

An extraordinary general meeting of the Village Main Reef Gold Mining Company (Limited), was held on Tuesday at the Cannon-street Hotel, for the purpose of considering a proposal to increase the capital of the company by the creation of £48,000 new shares of £1 each. Mr. P. TARBUTT, Chairman of the company presided. The SECRETARY (Mr. H. C. Porter) read the notice convening the meeting.

Together with the notice convening the meeting, the following sketch of the company's present position was circulated.

You will remember that it was pointed out in the last annual report and emphasised by the Chairman at the meeting held in July last, that the acquisition of 72 additional claims which had raised our company from a comparatively small concern to one of the most important mining properties on the Rand had entailed the necessity of providing a very much larger working capital for its development than was originally contemplated. The sinking of a new shaft to the depth of 1000 feet, the erection of the necessary pumping and winding machinery, increasing the battery power from 10 heads of steam to 13 heads, which the mine will be capable of supplying when fully developed together with the acquisition of sufficient water supply and storage and pumping of the water were estimated to entail a total expenditure of about £130,000. How to provide this sum without unduly increasing the capital of the company, or calling upon the shareholders to provide the money in the present depressed state of the money market has been the anxious concern of your directors. They were able to raise the funds necessary to commence and carry on these works up to date by way of loan at reasonable rate of interest, and the battery has been increased to 41 heads with the result that last month's crushing of 2450 tons gave 17.5 ounces of free gold and 52 tons concentrates assaying 5 ounces per ton and showed a very substantial profit. A magnificent water right has been acquired and the new shaft is already down over 220 feet. By an arrangement which the directors have now been able to make and with the consent of the shareholders to the proposed increase of capital the existing debt will be wiped out and an arrangement entered into for providing the whole of the additional capital required to fully complete the equipment of the mine.

The CHAIRMAN said: Gentlemen, you have heard the notice read and have had the circular we sent out asking you to authorise an increase in the capital of the company. Those shareholders who were present at the last meeting, or who received a report of that meeting, will have foreseen the necessity for this increase. The fact of our property having become so important a one is, of course, very satisfactory to all of us; but at the same time it causes a great deal of anxiety inasmuch as we have had to provide a very large additional working capital to what we originally contemplated. This necessity came upon us in times when shareholders were not happy if they were called upon to subscribe more money, and we had to make the arrangement we best could, and we have been very fortunate in having as our largest shareholder the Consolidated Gold Fields of South Africa. Had it not been for that company I think I can safely say we should not have obtained the additional 72 claims the acquisition of which has brought us into the position of one of the leading mines on the Rand. I may even go further and say that had it not been for them we should have had the greatest possible difficulty in raising the large amount of working capital that is required. They advanced us the money at a very reasonable—at a very low rate of interest; and when we had exceeded our borrowing powers as directors they consented to take 20,000 shares to extinguish the debt at the price of £3 each. (Hear, hear.) Now, two months ago any shareholder who wanted these shares would have bought them at £2 10s., so I think the directors have acted well towards the company, and that the Gold Fields of South Africa have treated us in a satisfactory manner. As

regards the mine, you will have seen a notice in the papers as to crushings being made, and when I last had the pleasure of addressing you in August our mine was not completely opened up. The position to-day is that for the last three months we made the following returns in free gold:—October 750 ounces, November 1350 ounces, and December 1700. In each month there have been certain little hitches incidental to new machinery. Otherwise the returns would have been still more considerable. The last two months have shown very substantial profits, and I hope they will go on increasing. As to the water-right, we have made an excellent arrangement, thanks to the Consolidated Gold Fields of South Africa. We have obtained a half use in a water right, conveniently situated for our mine, at a very small cost, and that water right will be more than enough for our purposes. I am asking you to confirm this proposition because I think if it is confirmed the future of the mine is certain. We have got the water right, we have got all the money we want, we know we have got the ore, and I think within a year or a year and a half we shall have one of the best outputs of any mine in the district. I shall be very pleased to answer any questions before putting the resolution. The Chairman concluded by moving the resolution.

Mr. DEACON seconded the resolution.

A SHAREHOLDER enquired what was the cost per ton of raising the ore; and how it was proposed to issue the additional shares.

The CHAIRMAN replied that in the last report the cost of raising the ore was estimated at 36s. per ton. That included mining and milling—in fact everything except the depreciation of the machinery which would come perhaps to another 1s. The month before last when there was no breakdown, the amount came to about 28s. a ton, an amount which he considered to be satisfactory. Of course, when there were more heads running the cost per ton would be reduced because the standing charges would remain the same. As to the issue of the shares 20,000 had already been taken up by the Consolidated Gold Fields of South Africa. They did not propose to issue the remaining shares at present, but rather to arrange for further advances that might be required.

The motion was then put and carried unanimously.

THE EXPLORATION COMPANY, LIMITED.

Proposal to form a new company.—“The South African and General Association (Limited).”

An extraordinary general meeting of the Exploration Company (Limited) was held on Monday, at the Cannon-street Hotel, for the purpose of considering and, if thought fit, approving a proposition for the formation of a new company to be called the “South African and General Association (Limited).” Sir HORACE FARQUHAR presided.

The circular calling the meeting contained the following passage as embodying the views of the board:—

It has been the practice of the Exploration Company to investigate business propositions, and to arrange with others (mainly its own shareholders as far as they were willing to join) for providing the necessary capital, the company acting as an issuing, house and receiving a participation or commission. The directors and some of the leading shareholders are strongly in favour of adhering to this policy, which does not necessitate the employment of any considerable capital, and is considered to afford ample scope for the profitable activity of the present company. But promising business is frequently offered which cannot be secured without a substantial amount of capital, and, if a syndicate or other combination has to be formed on every such occasion, the time required may result in the loss of the business. It is, therefore, thought desirable to incorporate, subject to the approval of the proposed meeting, the proposed association with a capital of £250,000 in shares of £1 each, of which 210,000 shares are now to be issued, while 40,000 are to be held in reserve. As an instance of opportunities which have occurred, the Deep level Development Company, formed under the auspices of, and managed by the Exploration Company, may be mentioned. Those who subscribed its capital of £55,000 have been enabled to receive, directly and indirectly, in addition to the profit of the Exploration Company, what at present quotations is estimated as worth £245,000, while further advantages are expected to accrue to them. It is intended that the new association shall work in friendly co-operation with the Exploration Company, and obtain business which the latter may introduce to it, and that the Exploration Company shall be appointed managers. The Exploration Company will act in this capacity through its directors (the association having no other directors) and be remunerated by a participation of 15 per cent. in the profits. It will also have an option to acquire the remaining 40,000 shares at par at the end of two years. The directors recommend that about 160,000 shares be offered at par to the shareholders who, on January 23, 1894, are on the register of the Exploration Company, at the rate of six-tenths of a new share (omitting fractions) for each Exploration ordinary share, and at the rate of 38 new shares for each Exploration founders' share. The right to this preferential allotment will be made transferable. Forms of application will be sent out in due course, and it is proposed to call up the money in instalments during the present year. Several of the largest shareholders, including the directors, are desirous of taking up their pro rata subscriptions. The remaining 50,000 shares are to be offered for public subscription. It is believed that South Africa offers the best opportunities for employing the funds of the new company in mining and financial enterprises. Mr. Hamilton Smith has arranged to proceed to Johannesburg, in the Transvaal, where the proposed managers, confident in the great possibilities and rapid progress of the country, and encouraged by the Exploration Company's past successful connection with it, intend to open a branch office of the association.

The CHAIRMAN said: Gentlemen, I think you have all read this notice of meeting. It is rather a voluminous article, and I think you will therefore probably take it as read. Those of you that were here at our general meeting will probably remember that I alluded to our intention of forming this new company, and I have very little more to say to you about it now than I had on that former occasion, excepting that we have decided that it should be a company with 250,000 shares, of which we propose to offer 160,000 to the shareholders of the Exploration Company, and, with your approval, we thought of offering the balance of 50,000 to the public, deeming it desirable that the public should have some proportion of the shares. I may tell you—perhaps it will be satisfactory for you to know—that we have had half that amount, that is to say 80,000 shares, privately subscribed for among the shareholders in the Exploration Company, and also that up to now we have not mentioned the subject to any shareholder who has not gladly accepted his proportion. Indeed, most of them were inclined to say they would be very glad to take more. That is the best proof I can offer you of what we hope for the future of this new company. Its object is, as I have already told you, that Mr. Hamilton Smith should go out to South Africa and in conjunction with our many friends out there take an interest in developing that great country, particularly Johannesburg. Well, gentlemen, I don't think I have anything more to tell you, except that we propose that 15 per cent. of the profits of the new company should come to your company here by way of remuneration for its services as managers of the new company, and also that the managing directors of your company, for acting in a double capacity, should have a percentage—it is not yet settled how much—for their proper remuneration. That embodies all I have to say to you, and now I will ask the solicitor to the company to read the resolution.

The SOLICITOR to the company (Mr. Rawlins) then read the resolution, which was as follows:—

That this meeting sanctions and approves the proposal for the formation of a new company to be called South African and General Association (Limited) or such other name as may be determined on, with this company as manager and a capital of £250,000 in shares of £1 each, of which 210,000 shares to be now issued, and about 160,000 shares thereof offered preferentially at par to the shareholders of this company on the register on the 23rd instant, in the proportions of six-tenths of a new share (omitting fractions) for each ordinary share held, and 38 new shares for each founders' share held, the remainder of such 210,000 shares to be offered for public subscription, and the other 40,000 shares being reserved until January 1, 1895, with an option to this company then to subscribe for the same at par, and this company to receive by way of remuneration such participation in the profits of the company, not being less than 15 per cent. as the directors may determine on; and this meeting authorises and requests the directors to take the necessary steps for carrying out and giving effect to the terms of this resolution, including settling, in such form as they may think fit, the agreement to be entered into between the two companies, with power to make such modifications in any of the foregoing terms as they may think desirable.

The CHAIRMAN then formally moved its adoption.

Mr. REDER seconded the motion.

Mr. PRATT, while acknowledging very great respect for the directors, urged that the ordinary shareholders of the company should

be allowed to subscribe for that portion of the shares it was proposed to allot to the public.

The CHAIRMAN was very glad to hear such a request made, because it evidenced an approval of the scheme before the company. The directors, however, were alive to the necessity of satisfying the people on the Stock Exchange, and the board were, perhaps, the proper persons to decide a matter of that sort. He might mention that one of the leading financiers in Europe had already expressed a wish to have a certain quantity of the shares.

The resolution moved from the chair was then put and carried unanimously.

TRANSVAAL GOLD EXPLORATION AND LAND COMPANY, LIMITED.

The company's affairs more firmly grounded.

The adjourned eighth ordinary general meeting of the Transvaal Gold Exploration and Land Company (Limited) was held on Thursday at the Cannon-street Hotel, when the chair was taken by Mr. NICOL BROWN.

The SECRETARY (Mr. C. E. Wells) read the notice convening the meeting.

The CHAIRMAN moved the adoption of the report and balance sheet, and in reviewing the balance sheet said that the first consideration was the capital account, which had been increased by the issue of 1312 new shares, making the total now issued £250,000. The bills payable represented the drafts against gold in transit at September 30 last and it happened to be £500 more than last year. The sundry creditors were decreased by £794 19s. 6d. The unclaimed dividends had been decreased by £126 2s. 6d. Some explanation was needed as to the balance of the premium payable to the African Gold Recovery Company. It had been proposed that the Transvaal Gold Company should themselves erect the plant and pay a royalty on the gold extracted. This they agreed to do on condition that this company paid a premium of £5000, which they arranged to pay by instalments. Up to the date of the balance they had paid £2000 and since then they had paid them another £2000, and the balance of the amount, £1000, was still owing. The reserve fund had been increased by £224 16s. 5d., arising from premium on the 1312 shares issued and sale of 13 forfeited shares, £113 5s. 9d.; interest on reserve fund re-invested in £112 11s. 11d.; consols £111 10s. 8d. Passing to the assets' side of the balance sheet, the farms purchase account had been decreased by the amount of money paid for Eden Hill less the expense thereon, making a net decrease of £9454 18s. 10d. The most important addition to the plant account was for the cyanide works. The erection account amounted to £3167 6s. 10d. and the premium, as already explained, to £5000. The sum of £2761 had been written off the whole plant and apportioned against the oldest and least effective parts of the plant, while the stores account had increased by £2301. The tree planting account was represented at present by a large outlay. Up to the present they had spent £1319 15s. 4d. They had six plantations, mostly doing well. The time was not far distant when, instead of laying out money on this department, they might expect to get a balance of revenue over expenditure. The sundry debtors' account was increased to the extent of £1971 0s. 6d. This was accounted for by gold shipment not realised at date of balance sheet. The ore on hand at last balance consisted of 2948 tons, estimated to contain 1608 ounces of gold. At this balance the ore on hand was 4636 tons, estimated to contain 2870 ounces of gold. The difference was represented by £3314 14s. 7d. The cash in hand at the banks in London and South Africa was decreased by £2299 17s. 5d. During the year 1892-3 £4234 19s. 8d. more than in the previous year was spent on the mines. There was a slight falling off in the actual number of the ounces obtained during the year, but there was no real falling off in the output of the mines, and instead of being only 14,000 tons of ore in eight they now had 50,000 tons. The average mining costs during the last three years had been as follows:—1890-91, 17s. 4½d. per ton of ore mined; 1891-92, 12s. 11½d. per ton of ore mined; 1892-93, 13s. 2½d. per ton of ore mined. The average content of the ore for 1890-91 was 4 ounces 3 dwts. per ton; the average of 1891-92 was 2 ounces 19 dwts. 21 grains per ton; the average of 1892-93 was 2 ounces 17 dwts. 21 grains per ton. This variation was due to the very rich piece to which he had already referred. With reduced cost of working and increased stamping power, such ore might be made to yield very good profits. The rates of transport were as follows:—1890-91, 6s. 6½d. per ton of ore carried; 1891-92, 7s. 1d. per ton of ore carried; 1892-93, 6s. 4½d. per ton of ore carried. The total amount of money spent in transport during the last three years amounted to £5583 4s. 6d. The crushing costs for the last three years were:—1890-91, 6s. 6½d. per ton of ore crushed; 1891-92, 5s. 4½d. per ton of ore crushed; 1892-93, 4s. 5½d. per ton of ore crushed. Compared with the published costs of other companies, these were very favourable. There was little to report as to the cyanide process. The weight of tailings treated till the end of December was 5455 tons, and the extraction varied from 30 to 40 per cent. of the gold contained in the tailings, but as it was difficult to sample these the percentage return was not quite reliable. The extraction since the process was started till the end of December was 3270 ounces of bullion. The results of the first few months were a great disappointment, but some of the causes of the small extraction were found out and at once remedied, and no further trouble was anticipated. The following was a summary of the costs of getting the gold:—Mining per ton of ore, say 13s.; transport, 6s.; battery, 4s. 6d.; cyanide, 13s. 6½d.; total, 37s.; to which were to be added the general charges at the mine. With the general charges added for the run of the mine ore the cost at present was a little over £2 per ton. During the last eight years £10,643 had been spent in surface prospecting. The result of all this work was to reveal the approximate outcrop of the great stratified ore deposit, bed, or seam, underlying many square miles of your property. The more they opened up the places where gold had been found they generally increased the amount of payable ore visible, and prospecting operations in future would probably be more confined to underground proving at the places where gold had already been found rather than in surface prospecting in distant parts of the property. They had recently ordered an addition of 20 stamps to the plant, and they hoped before very long that a further increase would be required, but it was evident that with deposits so irregular it was highly necessary not only that the existence of the ore should be clearly demonstrated, but its probable quantity approximately ascertained before the requisite stamping power could be safely estimated. Their manager had been instructed to adopt this method of working, and they confidently anticipated to obtain a large quantity of ore. The gold contents of the ore might be less, but the increase in the quantity of the ore should make up for any falling off in the assay value. With the extended mining and shipping operations, the additional stamping power, and the cyanide process now successfully initiated, they hoped to have plenty of ore—besides the richer ore—to keep the new mills fully employed. When they were started they would look forward to further extensions of the stamping power, and he thought the prospects for the future to be distinctly encouraging.

A SHAREHOLDER, in criticising the report and balance sheet, said the working expenses were too heavy. The amount invested seemed rather large, and he could not remember having seen any mention of it in a previous balance-sheet.

A SHAREHOLDER enquired when the additional stamps would be working on the property.

The CHAIRMAN replied that it would be very difficult to say. They were not yet arrived on the mine, and when they did arrive it was of the first importance that their foundations should be made secure.

The motion for the adoption of the report was then put and carried, the meeting terminating in the usual manner.

RAILWAY MEETINGS.

LONDON, BRIGHTON AND SOUTH COAST RAILWAY.

The coal strike and the Worthing epidemic: Able speech from the chair.

THE 96th ordinary meeting of the London, Brighton and South Coast Railway was held on Wednesday, in the board room of the London-bridge Station, the chair being occupied by Mr. SAMUEL LAING.

The SECRETARY (Mr. Allen Sarle) read the notice convening the meeting.

The CHAIRMAN said they have been so long accustomed to meet the shareholders with little to say except to offer congratulations, that it was somewhat of a novelty to have to announce diminished revenue and a declining dividend. When they met last July, he was not particularly sanguine, although the past half year had been exceptionally good. He could not help feeling that the prolonged depression of trade must, sooner or later, tell on the receipts, and that the unusually fine weather of the first half-year must have tended to transfer to that half-year traffic, which, under ordinary circumstances, would have fallen within the second, and accordingly they recommended carrying forward an unusually large balance. Still, neither he nor any of the directors or officers, had the least idea that the falling off would be so sudden and so large, and that a half year which showed an increase in gross receipts of £46,550, would be followed by one which showed a decrease of £81,615. Nor would it have been so but for several exceptional and temporary causes which it was impossible to foresee six months ago, and which were fast passing, or had already passed, away. As stated in the report there were two main causes of this decrease which were obviously exceptional, and could be measured in definite figures—viz., the coal strike and the Worthing epidemic; and two others, which were also exceptional, but could not be so easily measured—viz., the drought and the depression of trade. The coal strike was responsible for £32,000 of the decrease of the half year, 325,000 fewer tons of inland coal having been carried, and the Worthing epidemic for about £15,000—together £47,000, leaving about £34,000 for the decrease from other causes. The drought had no doubt a considerable effect, and the decrease of £14,000 in general goods traffic was probably in a great measure due to it, as well as some part of the decrease in local passenger traffic. But the most difficult to estimate, while at the same time the most important for the future prospects of the company, was that which might be set down as the result of the long continued depression of trade. The decrease of the passenger traffic was of too short a date to draw from it any certain conclusion. The first half-year of 1893 was as exceptionally good as the second was exceptionally bad, and the goodness of the first half owing to the early commencement of summer weather 'was no doubt one considerable cause of the badness of the second. Money generally spent in holiday traffic in July, August, and September, was spent in April, May, and June, a surmise confirmed by the excursion traffic of the second half-year showing a falling off. Taking the whole year 1893 there was an increase over 1892 of 680,000 in the number of passengers carried, and of £8800 in the receipts from coaching traffic, so that the depression of trade had had little effect and showed itself mainly in the continued decline of first and second class traffic. This had been going on for many years. While, ten years ago, the first and second class, together, produced £450,000 per annum, and the third class £818,000, the former had sunk to £368,000, while the latter had risen to £1,107,000. It was only in the accounts of the past half-year that any evidence of special depression could be traced. The falling off of first and second class traffic had been greater than usual—viz., £11,250, or 10 per cent. in first, and £14,000, or 14 per cent. in second, as compared with the corresponding half year of 1892, and there had been a slight decrease of £2000, or 2 per cent., in periodical tickets. Some of this was attributable to the Worthing traffic, a good deal of which was of the higher classes, but certainly a part was due to the depression of agriculture and trade and the financial troubles in the City. Turning to the third class traffic, which was their mainstay, he found grounds for encouragement. Notwithstanding all the adverse circumstances which had affected the past half-year, the third class showed a slight increase in numbers, and a very slight decrease of only £2000 or a third of 1 per cent. in receipts; and that although a good deal of third class traffic must have been simply transferred from the second to the first half year; and upon the whole year 1893, the third class showed an increase both in numbers and receipts. They carried in the year 42,160,370 third class passengers, who paid on the average 6½d. each, and they ran 39 workmen's trains daily, carrying more than 4,500,000 workmen at an average fare of 3½d., or less than 4d. per mile. Turning to the question of expenditure, the increase of £12,353 for the half year was chiefly owing to the larger renewals of rolling stock charged to revenue. The large increase of traffic for the preceding two or three years, and the improvements recently made in passenger carriages, had rendered it desirable to proceed more rapidly with the rebuilding of the older portion of the stock, which although still safe and serviceable, had to a certain extent become obsolete. Accordingly they decided to increase the amount devoted to ordinary renewals, and to build 30 new bogie carriages of the best type, to be charged to revenue over three half years. The cost of these was estimated at £30,000, but owing to the favourable time for obtaining tenders, they had been contracted for at £24,000, so that the charge for the past and two next half years would be £8000 instead of £10,000 per half year. The total increase of renewals for the past half year had been £14,426, of which £8000 was for the above special cause. Of other heads of increased expenditure rates and taxes accounted for £5418, while the principal savings had been in locomotive power, £6652, owing to fewer coal trains having been run during the strike. There was also a decrease of £2745 in compensations. The small increases under some of the other heads were mainly due to increased wages paid to additional men, taken on in order to shorten hours of work. Next to the question of traffic that of capital was most important in forming any just estimate of future prospects. In the report it was stated that there was no immediate need for raising fresh capital, and that the amount which it was proposed to authorise for doubling the line between Croydon and Redhill would not be required for a considerable time. The last grant of £537,600 of ordinary stock in January, 1892, gave in cash £741,582, while the capital expenditure of the two years 1892 and 1893 had been £627,567, principally on the works sanctioned by the Acts—viz., widening the line between Battersea and Streatham; widening the line between Grosvenor-road and Victoria; enlargement of goods station at Willow-walk; enlargement of East Croydon Station and widening of the line adjacent thereto; and also including £108,700 for the purchase of a large block of house property at Victoria with a view to future contingencies, which produced a rental. The total estimate for the completion of these and other matters now in progress exclusive of the widening of the line between Croydon and Redhill was shown by the accounts to be £437,000, which would be spread over a considerable time, the capital expenditure of the past year having been only £130,301, of which £18,326 was for this company's share of the new steamer *Tamias*. The expenditure in doubling the line to Redhill, assuming they got the Act about July would not be much felt during the present year, as the purchase of the land and preparations for the tunnel would occupy some time, and after the work was actively commenced, being mainly tunnel, the expenditure could only proceed slowly. Before requiring to raise any new capital under this Act, there remained also £301,700 available debenture power, including £198,043 6s. 8d., which it was proposed to take a resolution of the meeting to issue, as and when required which would produce about £450,000. There was also £109,040 of second consolidated preference 5 per cent. stock, the issue of which had been authorised and could be made at

Gwalumukhi, in the Kangra district. The only geologist who has visited this place expressed some doubt as to the genuineness of the phenomenon, but the visit was a very cursory one, made some 35 years ago, when little attention had been paid to either petroleum or natural gas, and the locality would be worth re-examining in the light of the subsequently acquired knowledge. Leaving the west, with its gloom and failures, we will now turn to the east, the region of success and promise for the future. In Upper Assam, the oil springs have now been known for a long time; they extend 100 miles from the Singpho hills, on the east, to the Sibsagar district, on the west, and throughout this district are both numerous and abundant. The earliest attempts at exploiting this field were in 1867, when Messrs. Mackillop, Stewart, and Co., of Calcutta, obtained a concession, and sunk some wells at Makum. Altogether eight wells were put down, mostly successful, one of them being said to have yielded 82,000 gallons in the course of eight months. The borings seem all to have been shallow, and the only reason for the abandonment of these workings appears to have been the difficulties of transport and lack of means of dealing with the oil. Nothing appears to have been done towards the development of the oil fields for 20 years, when work was begun at Digboi by the Assam Railway and Trading Company and by the Assam Petroleum Syndicate. The former of these two associations has also been working at Makum, where Messrs. Mikillop, Stewart, and Co. were so successful, but whatever the cause, these more recent trials were long unsuccessful. I heard, however, just before leaving India, that a well, which flowed eight to ten barrels a day, had been struck in this locality. The other locality, where both the associations are working, having each a grant of four square miles, is in the neighbourhood of the Digboi and Bapa punga. Here some 10 boreholes have been put down in all, and judging from them and from information obtained from Mr. Townsend—my own visit having been too brief to collect many details—it would seem that there are two distinct oil bearing horizons yielding oils which differ widely in the amount of solid paraffin they contain, if in no other respect. To begin with the lower of these oil zones, it can be traced for a couple of miles through the forest by numerous outflows of petroleum, and the impregnation of the soil with the dried up residue left after the evaporation of the more volatile constituents of the oil. The strike of this band bends gradually round from N.N.E. to N.W., and the dip is high, ranging from 40 deg. to 60 deg. To the west it gradually steepens, while to the east it flattens off somewhat. From this description it will be seen that the oil field is of the second type described in the opening portion of this paper, and the very abundant shows of oil at the surface are promise of an abundant yield, a promise which has been partially fulfilled by the striking of two spouting wells, one in January, 1892, by the railway company, the other in March, 1893, by the syndicate. In both cases pressure was soon relieved, and the flow of the oil at the surface ceased; but this is only what must be expected in a field with the geological structure of this one, and though oil has ceased to flow of its own accord there is abundance to be obtained by pumping. The outcrop of the second oil zone lies some half mile to the north east of the first and at a higher geological horizon. Here two wells have been sunk by the syndicate, both of which have obtained oil, but in smaller quantities than from the lower bed; the oil, too, appears to be of a different quality, containing a smaller proportion of the lighter oils and of solid paraffin, and a larger proportion of the heavier oils suitable for lubricating purposes. It is too soon yet to speak with certainty of the future of this field. In 1892, 8500 gallons of oil are said to have been extracted from the railway company's wells, according to a government report, and besides this, a large, but unknown, quantity ran to waste from the spouting well before it was got under control. This infinitesimal yield does not, however, represent the true possibilities of the field, for in the absence of any means of utilising the oil the wells were not worked. Since then, however, a refinery has been established at Dibrugarh, and we may hope to see Digboi and Makum established among the productive oil fields of the world. On the west coast of Burma petroleum is known to occur in the Ramri and Cheduba islands, where attempts to work it on a large scale have been made by two companies, the Arrakan Oil Company and the Baronga Company. The produce was too small to justify the continuance of operations on a large scale. Moderate amounts of oil are still obtained annually from open wells, but I have not been able to obtain statistics of the production, while it is insignificant in importance. Lastly we have to consider the newly-acquired province of Upper Burma, where the only productive oil-field of the empire is situated. The original discovery of the oil-field of Yenangaung is lost in the mists of antiquity, but the highly picturesque version which passes current at the present day, reduced to plain language, would seem to indicate that the petroleum was discovered some 800 years ago, but it is far from improbable that in mixing up the discovery of the field with mythical incidents, its antiquity has been exaggerated. The petroleum industry of Upper Burma is, however, of considerable age, for as far back as 1759 it was recorded by Captain Baker that 200 families were "employed in getting earth oil out of pits some five miles in the country," from Yenangaung, thus showing that the industry was well established nearly a century and a half ago. Until 1887 the only means of working the oil in use were square shafts rudely lined with timber, in the bottom of which oil collected and was laboriously drawn up in earthen vessels by means of a rope passing over a rude wooden framework at the mouth of the well, and though many deep borings fitted with steam pumps are now at work, the greater part of the oil is still produced in the older and more primitive manner. In the course of time, as the upper oil sands, which alone can be tapped by the dug wells, become exhausted, the drilled wells will doubtless come to be the only source of supply. It may be noted that the limits of the Yenangaung oil field have been practically defined on all sides but one. The actual oil-bearing territory is about 3½ miles long by half a mile wide; at either extremity are situated the Burmese villages of Twining and Beme, while in between them is a tract of country which the native workers believe to be barren, but which has been proved by Messrs. Finlay, Fleming, and Co. to be as fruitful as the land on either side. To the south of Beme the prospecting operations of the Upper Burma Oil Syndicate have shown that there is no petroleum. On either side of the axis of the anticline it has been found that the oil-bearing territory does not extend beyond the region of low dips near the crest of the fold, and to the north of Twining it is very doubtful if the productive area extends to any distance. This is the only direction in which the limits of this oil field have not been determined. In so far as can be judged from analogy and the experience of other fields, no great extension in this direction can be looked for. Some 54 miles N.N.W. of Yenangaung the oil field of Yenangyat is found on the right bank of the Irawadi. The produce of this field is small as yet, and its future difficult to judge of; it may, however, be noted as an interesting point that the oil is under sufficient pressure to allow it to flow naturally at the surface in a suitably arranged borehole. A third oil field in Upper Burma which may be mentioned is that of Minbu. The mud volcanoes of this district have frequently been described. As in Cheduba and Ramri, petroleum is poured out along with the mud and collected in small quantities. Some half-hearted attempts to test this region as an oil field have been made, but not enough is known to enable any opinion to be formed of its future prospects. Having passed in review all the known oilfields of the empire, and described their present state of development, I will now attempt to justify the second part of the title of this paper. As has already been mentioned, there is little to hope for from the petroleum of the western fields, and it is very questionable whether they are destined to have a future at all. In the east, however, things are different. Upper Assam is known to contain an extensive area of richly petroiferous rocks, whose future we may be allowed to look at in a hopeful manner. As yet this area has only been tested at two points, both chosen solely on account of their nearness to an open line of railway; the greater portion of the region is still too inaccessible for its exploitation to be commercially possible, but it will soon be skirted by the Chittagong-Assam Railway, now in course of construction, and when this is completed it seems possible that the Assam oil, with all the advantages of water carriage, will be brought down to Calcutta at a price which will enable it to compete with

the imported article. In Cachar and Arakan the prospects are much less bright; in these regions only a moderate development of the industry can be looked for, while even this will have to wait till the development of more favoured regions has introduced men and materials into the country, and converted a pioneer into an established industry. Finally, we may look for a great expansion of the petroleum industry in Upper Burma. The oil fields of Yenangyarg and Yenangyat, both of which derive their oil from beds of the same age, and the occurrence of oil on the same horizon at Minba and in some isolated localities to the north of Yenangyat, show that the oil is spread over a very large area, in which it is almost certain that other fields will be found. Moreover in this area the rocks are to a great extent only moderately disturbed, and thrown into well-defined anticlinal and synclinal folds, so that the oilfields, will probably belong to the first type and consequently be likely to yield considerable supplies of petroleum. As regards the future, the two principal things required seem to be, firstly, a survey of the areas in Burma and Assam in which oil is likely to be found. This would not need to be on a larger scale than two inches to the mile, nor need there be any demarcation of blocks; but the survey should be geological as well as topographical. The publication of these maps, with the accompanying descriptions, would put the adventurer in possession of all the information procurable in advance of actual boring operations, and would guide him to the places most suitable for the inception of his venture. The second is the promulgation of a set of rules for the grant of mining concessions, which will prove acceptable to would-be applicants, without sacrificing the general interests of the country. This is the more difficult task, for the adventurer—and I use the word in its original sense, without any reference to its acquired implications—is apt to forget that, while he must look to his own interest, the Government have to act as trustees of the country at large and of posterity. The conflict between the interests of the one party and the duties of the other will constantly lead to mistaken judgments on either side, which render it difficult to steer accurately the middle course between an undue favouring of individuals on the one hand, and a drag on the progress and prosperity of the country on the other. Such rules, I believe, will shortly be published, and we may hope that the near future will see a considerable increase in the production of petroleum in Burma and Assam, an increase which will enable these provinces to provide for their own consumption, and in part for that of the rest of the empire, though there seems no reason for anticipating that India will ever rank with Russia and America among the great petroleum exporting countries of the world. For the present this must remain a hope. So little is known of the geology of these regions that it would be rash in the extreme to prophesy, but what is known is enough to hold out a prospect of success, and an inducement to the acquisition of further knowledge. (Applause.)

Mr. REDMOND said he was distinctly of opinion that the lecture to which they had all listened with such interest was a desirable and valuable sort of communication. The most important feature in connection with the development of the petroleum fields of India was the encouragement which it would undoubtedly give to British enterprise. It was, however, necessary in the interests of the Empire that the work of exploration for petroleum should be in no case be attempted without a full appreciation of the difficulties involved. It was in the highest degree important that the work should for some time be carried out under energetic, skillful, and experienced management. Otherwise it was highly probable that a great deal of money would be wasted, and so much disappointment and discouragement incurred by the adventurer, that the development of the oil fields would be of necessity retarded for a considerable time. There was, indeed, a distinct danger in too sanguine an estimate of the future of this industry, and upon that account he had been particularly glad to hear the lecturer caution his audience to accept the statements of geologists in inverse proportion as the confidence with which they were advanced. The speaker concluded by expressing the hope that the work of a complete geological survey of the country would be entrusted to one who had shown himself so fitted to perform the work as the lecturer.

Sir JAMES MACKAY said the audience had all listened with the greatest interest to a paper which would certainly form a most valuable addition to the information at the disposal of the public in regard to the oil fields of India. They could not but regret that Mr. Oldham's researches had led him to the opinion that India would not be likely to vie with Russia and America in the industry, but they hoped that the anticipations and hopes which he certainly had formed would be realised. Sir James concluded by heartily thanking the lecturer both on behalf of the audience and of himself for his interesting lecture.

THE RHYMNEY IRON COMPANY AND THE SLIDING SCALE.—The directors of the Rhymer Iron Company, in an interim report just issued, deplore the disturbance and fluctuation which has attended their operations during the past half year. In their July report they gave full particulars of the arrangements which had been happily arrived at in South Wales in February, 1893, between the masters and the men. The sliding scale agreement, which had been in operation for 19 years, was there continued, with mutual concessions, until September, 1894. In consequence of the mutual spirit of concession which prevailed between masters and men the companies' collieries only stopped working for a few days, though others in the same district were stopped for about a month. The advantages that have accrued to the workmen of the company, as well as to the company itself, from continuous working, during this serious crisis in the history of the country, furnish an admirable illustration of the benefits of the sliding scale. Under its operation the company's employes have already received an increase in wages of 10 per cent. since August, making 20 per cent. above the standard of 1879; and they will no doubt receive still further bi-monthly increases as the higher prices of coal now obtainable are more generally realised. The directors are not yet, of course, in a position to indicate any precise results as likely to be obtained by the end of the year on 31st March, 1894; but the proprietors will be glad to learn that, during all the troubles above referred to, the profits realised by the company have been very satisfactory. The directors had fortunately refrained from encumbering the company with forward contracts at low prices, and they were thus able to take advantage of the higher prices recently obtainable, at the same time that their output has been gradually increasing, and their cost of working has been moderate. They are glad further to report that the general financial position of the company is, after sinking fresh pits and defraying all necessary expenditure, sound and satisfactory. The quantity of coal raised by the company during the half-year ended 30th September, 1893, was 285,648 tons, against 249,254 tons in the corresponding period of the previous year, and for the subsequent three months ended 31st December, 1893, the output shows comparatively a still larger increase.

FORTHCOMING MEETINGS.

* We shall be obliged if Secretaries or other Officials of Mining, Railway and other Companies will be good enough to advise us as early as possible of the date, time and place of their forthcoming meetings—whether statutory, semi-annual, annual, general or extraordinary, confirmatory or adjourned—in order that particulars may be announced for the benefit of our subscribers and more particularly our country readers. Balance sheets, reports and other matter to be submitted at such meetings should, where possible, accompany the intimations of the meetings sent.

Name of Company.	Date.	Nature of Meeting.	Place.	Time.
Bombay Gold Mining Co.	Jan. 25	General	Winchester Ho.	12 a.m.
Great Eastern Railway	Jan. 30	General	Cannon-street	11 a.m.
Can. African & Zoutpansberg	Jan. 30	General	Cannon-street	12 a.m.
St. Augustine	Jan. 30	General	Cannon-street	2.30 p.m.
Ontario Lands and Oil Co.	Jan. 31	General	Winchester Ho.	12 a.m.
Lon., Tilbury & Southend Ry.	Feb. 1	General	Cannon-street	—

MINING NOTES.

HOME, COLONIAL, AND FOREIGN.

“OUTIS,” writing in the *Sydney Daily Telegraph* says:—Here is the drama of the average New South Wales gold mine. Act 1: Man in moleskins finds a quartz reef, and sells it or a song to the local public or storekeeper. Bayer comes to Sydney, and sells it for £100 paid by p.m. Man in Pitt-street sells half of it to a particular friend for £200, also paid in p.m. Particular friend sells half of his half for £400 to a still dearer friend for £800, consideration again given in stamped paper. Broker forms syndicate to buy them all out for £10,000, half of which, just to show their faith in the concern, they are willing to take in shares, the other in p.m.s. Public company formed, capital £100,000, syndicate to receive £50,000 cash and 80 fully paid up shares. Board of directors appointed at two guineas a sitting per man. Act 2: Cheerful report received from mine; ground kindly looking, and manager hopeful that something will soon be struck. First call made. Money spent in the purchase of an old and utterly unsuitable plant that the directors knew where to get cheap. Another report—Down; nothing found, but hope still springing eternal in the managerial heart, and the shareholders encouraged to be of good heart, as arrangements are made for fixing up a pump. More calls made, more reports, paid up shares press heavily on the market. Act 3: Crushing commenced; reported to be going 11 ounces to the ton; particular friends advised to “get some of the shares at any price.” Particular friends get them; advisers get the price. Clean up. Yield, 4 ounces 3 dwts. from 87 tons of stone. Failure attributed to pyrites. Machinery declared unsuitable, but no more uncalled capital. Scrap used for pipe lights. Curtain, behind which rests the unsuitable machinery to be bought by the directors of the next company formed. If, under a system of this kind, a matter of 5s. a week in miners' wages can make all the difference between failure and success, there is a virtue in the modest crown which few people have hitherto suspected.

THE White Cliffs opal field, says a Wilcannia correspondent to the *Australian Mining Standard*, is at present attracting considerable attention. About 600 men are reported to be on the field, and a considerable quantity of opal is being unearthed at the various claims. An Adelaide opal buyer has just returned from a periodical visit to the field, and is reported to have made extensive purchases. The following particulars are to hand from the field:—Melville, Jackson and Co., tributors on five, Wilcannia Company's, who are excavating a paddock some 40 feet by 75 feet, have unearthed about 12 lbs. weight of opal, and have still exposed several promising-looking seams. This was first struck about 18 inches from the surface. It was not of the very best grade, but nice junky pieces over half an inch thick. A parcel was sold for £140. A report is current of a big find on six. On seven and eight tributors have little to report. J. Morrison on seven is busy taking out opal. On block 3, R. S. Gregory and W. Hickey are on opal, and have a considerable parcel. P. J. Cotter, late manager of Glen Lyon, has obtained a little good stone. J. Brown's parcel was sold for £105, and Trenchy and Company's for £110. Both parties are working Pickett's lease.

THE new cyanide works at the New Aurora West Mine, which will have a monthly capacity of about 4000 tons, are nearing completion. In their design provision has been made for, if necessary, doubling this capacity. The vats are 30 feet in diameter, and will be discharged through portholes at the side in manner similar to that now in use at the New Bietfontein property. The vats will be covered by a shed. Power for the works will be supplied electrically from the battery engine. The installation which will be required for this purpose has been entrusted to Mr. J. Hubert Davies, and will include arrangements both for pumping and lighting. As a consequence, says the *South African Mining Journal*, of the disappointing results which have been obtained from a large proportion of the ore at present developed which has been found to be of too low grade to send to the mill, the development of the mine is in a somewhat backward state and will now require to be pushed forward with all possible speed. It is, therefore, satisfactory to learn that the boilers for the new compressor plant have arrived and are now in course of erection. These are three in number, each of 100 h.p. The compressor plant itself, which has been ordered from Messrs. Nasmyth and Wilson, is of compound type and of large size, with a capacity equal to the supply of 20 drills.

A GERMAN magazine publishes the following particulars of the nickel industry of Scandinavia:—From 1848 to the end of 1892 about 330,000 metric tons of nickel ore were extracted in Norway. The maximum yearly output (42,530 tons) was made in 1876. Since that time the production has been only 5000 to 7000 tons per annum. The average nickel contents of the ore have been as follows:—1851—60, 20 tons; 1861—72, 45 tons; 1873—76, 245 tons; 1876, 360 tons; 1877—80, 100 tons; 1881—85, 125 tons; 1886—92, 105 tons. In some mines rich ore, although in small bodies, has been found, as, for example, at Beieren, ore with an average of 7 per cent. nickel (nickel-bearing pyrite and pyrrhotite); and in other places with an average of about 5.5 per cent. nickel. In the better mines, first-class smelting ore, with 3.5 to 4 per cent. nickel, can often be sorted out, but the grade of the bulk of the ore is much lower. In 1870 miners were satisfied with a yield of 0.8 to 1.3 per cent. nickel from the smelting ore, the actual assay of which was 0.9 to 1.5 per cent. In later years, when only the richer mines have been operated, and hand-sorting has been practised with more care, the yield has increased, varying from 1.4 or 1.5 per cent. nickel, at least, to 2.5 per cent., with an average of 2 per cent. In the best mines the cost of producing one ton of ore, assaying about 2 per cent. nickel, varies from \$1.67 to \$3.09, averaging \$2.38. One kilogram of nickel in ore, therefore, costs 10.71 to 14.28 cents (the small amount of copper contained in the ore being reckoned free), while in some mines operated on a large scale the cost may be as low as 7.14 to 9.52 cents. If modern metallurgical methods were introduced, the Norwegian nickel industry could doubtless attain considerable proportions. The nickel contained in ores produced in Sweden from 1866 to 1875 averaged 65 to 70 tons per annum; since 1886, however, it has been only 10 to 15 tons per annum.

PRACTICALLY the whole of the new plant has now been delivered on the property of the Paarl Central. Its erection is now being pushed forward as rapidly as possible, and it is hoped that everything will be ready for a start by the end of this month. The Globe engine which is being supplied by Mr. H. Almsworth to operate the Gates crusher has not yet arrived, but its delivery is expected within ten days. An excellent example of a highly successful electrical pumping plant, supplied by Mr. Hubert Davies for the delivery of water to the mill from the dam may be seen on this property. A horizontal three-throw pump is employed with a plunger 9½ inches diameter and 10 inches stroke. It is capable of delivering 16,000 gallons per hour with a lift of 200 feet, and runs at from 45 to 50 revolutions per minute. The installation works continuously without any hitch, and has given the management the greatest satisfaction.

ACCORDING to the calculations of a Japanese authority, Japanese coal will become exhausted in 25 years and 10 months. The method by which this conclusion has been arrived at is as follows: In the first place he gives the statistical returns of the yearly yield of coal from 1882 to 1891, by which he gets 17,453,390 tons as the average annual yield. He then calculates the proportional annual increase of yield, the average of which he takes as 13 per cent. With these data he estimates that in 1901 the yield will be 10,310,278 tons, and in 1911, 303,347,350 tons. Proceeding in that way he arrives at the conclusion that the total yield for 25 years to come, computed from current year, will be 515,552,326 tons. Now the latest figures given by the State Department fix the capacity of the Japanese coal mines

roughly at 759,720,000 tons, and the proportion available for practical purposes being, according to the experience of England, three-quarters of the total capacity, it follows that the actual amount of coal which the mines will yield for use is 369,790,000 tons. If from that amount be deducted the aggregate annual minings in 25 years reckoned from 1891 there remain only 54,237,674 tons. In other words in January, 1916, there will remain to Japan a supply of coal only sufficient for 10 months.

“BENDIGO, much as it has been discredited in some quarters, will show a fairly prosperous mining business for the year so quickly closing,” says the *Australian Mining Standard*. “The last calls have now been made, and it is possible to estimate, with some degree of correctness, the balance in favour of the dividends. Shareholders have had to pay pretty stiffly this month—some £18,000; but this leaves a balance on the year of £70,000 so far, and the dividends still to come will increase the credit considerably. The gold yields, we note with pleasure, show a large increase as compared with those of '92, and during '94 we expect to see them even greater. A considerable extent of new country has been taken up on the Comer, Prince of Wales, and Sheephead lines, and as a consequence the calls have been heavier than usual. Providing, however, that work is kept going in these new ventures, Bendigo and district should reap a reward during the coming year.”

SAMPLES of gold continue to be brought to Buenos Ayres from a locality near the head waters of the Chubut River, in the Argentine Republic, under the shadow of the Andes. The first gold discoveries were made in January, 1892, and others have since taken place. The samples to hand have been examined and pronounced rich, but it is not at present certain that the yellow metal, despite the good promise of the samples, can be found in sufficient quantities to pay for working. The territory of Chubut has, however, great natural resources of many kinds, and good prospects of development, and if anything should come of the gold discoveries they may be the means of giving a lift to the Republic in general and to the territory in particular.

“It is not wise for prospectors and miners to become unduly excited over the fabulous reports which have come from the Goler and other districts in the Mojave desert,” says *The Mining and Scientific Press*. “It is no doubt true that there is gold in these districts, and probably a good deal of it; but it is likewise true that the available placer territory is to a considerable extent appropriated. The disadvantages of existence in such a region should be considered by all who contemplate going there. It is dry, remote, difficult of access, and supplies are expensive. One who goes in must be prepared to undergo more or less hardship. There are, no doubt, some who will secure fine claims; the majority run good chances of coming out empty-handed.”

THE new compressor plant which has recently started work at the Durban Roadport Company's mine is said to be running fairly satisfactorily. It is of compound type, similar to those in use at the May Deep and Metropolitan Companies, with capacity equal to 12 drills, Messrs. Walker, of Wigan, being the manufacturers. As the company has at present no necessity to employ the full number of drills which it is capable of operating, arrangements have been made with the Princess Company for the joint use of the plant, whereby considerable benefit is likely to accrue to both companies.

THE 15-head mill at the Gipsy mine is said to be running continually and the cyanide works of 5,000 tons monthly capacity are finished and have just started. The vats in these are 22 feet in diameter, and have been enclosed in a suitable shed. Their discharge is effected by the old method of shovelling out the sands over the tops of the vats into trucks. The mine is stated to be looking exceedingly well and the management is fully satisfied with the company's prospects.

AN important discovery of coal has been made at Forest Row, Kent. A party of men, while engaged in sinking a well, came upon a thick seam of coal. This is the second discovery of the kind in the county, a similar seam having been struck in some brickfields on the borders of Kent and Sussex. Samples of the fuel have been tested by specialists, with highly satisfactory results. A committee of county gentlemen has been formed for the purpose of prosecuting experiments.

WE are informed that 125 tons from the Hall Mines, Limited, are now on their way to Swansea from British Columbia, and that this is the first shipment of the new company.

THE mining exhibits sent by the Province of Columbia to the Chicago World's Fair have arrived in England, and in the course of a day or two will be placed on exhibit at the Imperial Institute.

WE understand that Mr. Samuel Gifford leaves London 9th February, on behalf of Messrs. John Taylor and Sons, to inspect and report upon gold bearing properties in Western Australia.

MANCHESTER, SHEFFIELD, AND LINCOLNSHIRE RAILWAY COMPANY.—At a half-yearly meeting of the shareholders of the Manchester, Sheffield, and Lincolnshire Railway, held in Manchester, on Wednesday, Sir Edward Watkin said the loss sustained through the coal strike on railways and canals was £260,165, and that loss was further increased by other causes to £287,225. Economies had saved £32,200, leaving the net loss £276,190. He urged shareholders to face their loss like men, and prophesied that they would soon work the concern round. He was glad a suggestion which he had made to the effect that application be made to Parliament to capitalise the loss had been overruled. The directors had borne their share of loss like everybody else.—A lively discussion ensued upon the report.—Mr. Baxton pointed out that nothing was allowed for depreciation on the face of the accounts. It was not, he contended, managed on sound economic principles.—Considerable interruption ensued, and Mr. Austin asked whether it was a shareholders' meeting or a bear garden.—Mr. Baxton said Sir Edward and Mr. McClure had too many engagements to pay attention to the affairs of the company.—An amendment suggesting the withdrawal or suspension of both found no seconder, and the report was adopted. The following resolution was carried:—“Bearing in mind the disastrous effect upon the company's credit of the serious default in preference interest, the meeting urges the directors to propose a scheme whereby such payments in their sequence may be assured for the future.”

QUEENSLAND INVESTMENT AND LAND MORTGAGE COMPANY (LIMITED).—An extraordinary general meeting of the Queensland Investment and Land Mortgage Company (Limited) was held on Wednesday, at the Cannon-street Hotel, for the purpose of obtaining the approval of the shareholders to a bill to be presented to Parliament authorising the company to divide its shares into ordinary and preference shares as might be determined. Mr. N. Spens, who presided, in moving the resolution, did not deem it necessary to say a great deal in support of it, seeing that it was merely a continuation of the policy indicated in the last report of the directors and unanimously adopted by the shareholders. It was of the highest importance that they should get this power, and while some gentlemen of legal experience—notably one of the shareholders—was of opinion that the promotion of a bill in Parliament was unnecessary to attain the particular object in view, Mr. Palmer, the eminent counsel, took a contrary view, and as it was necessary in the interests of the shareholders that the matter should be placed beyond doubt, the directors had resolved, with the concurrence of the shareholders, to take the course embodied in the resolution before the meeting.—Mr. Pitt Lewis, in a speech of some length, urged that the expenses of promoting the proposed Bill should not be incurred until at least the opinion of a third counsel had been taken.—The Chairman replied that the fact that Mr. Palmer and Mr. Pitt Lewis were at variance upon the point was sufficient evidence of the necessity of the Bill, and the resolution was then put and carried.

COMPANIES AND THEIR DOINGS.

Reports, Balance Sheets, Dividends, &c., of Mining, Railway, Banking, and other Companies.

MINING COMPANIES.

Randfontein Estates Gold Mining Company.

THE following circular has been sent to the shareholders, dated January 15th:—The directors of the Randfontein Estates Gold Mining Company, Witwatersrand, Limited, propose to construct into a separate company that portion of the property known as the "Rietpan," consisting of two mynpachts of 100 morgen each and about 160 claims adjacent thereto, together with the relative water rights and reservoirs and all the splendid machinery now erected and in course of erection thereon, including a 60-stamp battery and extensive cyanide and concentrating plants. The basis of the proposed construction will be as follows:—1. The name of the new company is to be "The Randfontein Pan Gold Mining Company, Limited," and the head office is to be in Johannesburg. 2. The capital is to be £350,000 in £1 shares, of which £300,000 (viz., £50,000 cash and 250,000 shares) is to be paid to the Randfontein Estates Company as the purchase price, and the remaining 50,000 shares will be held in reserve by the new company. 3. Of the 250,000 shares to be handed to the Randfontein Estates Gold Mining Company, Limited, that company will retain 50,000 as a reserve fund, and will distribute the balance of 200,000 shares *pro rata* to their shareholders as a bonus. 4. The £50,000 cash to be paid to the Randfontein Estates Company will be raised by offering 50,000 shares of the new company *pro rata* to the shareholders of the former company at par. It may be mentioned that the whole amount has been underwritten by a syndicate, who will take up at par any shares which the Randfontein Estate shareholders do not subscribe. The new company to be thus formed will acquire a fully-developed mine which is already earning handsome profits, and which in about six weeks' time, when the full complement of 60 stamps and all necessary cyanide and concentrating plant will be completed, will be in splendid working order, and it is anticipated that the company will be in a position to pay steady dividends from the outset. The 50,000 reserve shares will form a valuable asset to meet future contingencies, and neither the whole or any portion thereof will be issued unless it is found necessary in the interests of the company to erect, in addition to the 60-stamp mill which will shortly be at work, more machinery or stamping power to work the extensive claim and mynpacht property of the new company, or for such other purposes as may be most beneficial to the general body of shareholders. In any case, should any of the 50,000 shares be issued, they will in the first instance be offered to the shareholders *pro rata*. In the meantime dividends will only be paid on a capital of £300,000. The directors have deemed it advisable to acquaint you with the details of the above proposal without delay, as they contemplate calling a general meeting of shareholders at the company's head office in Johannesburg at an early date, for the purpose of obtaining authority to carry it into execution. It is the intention of the board, as soon as the scheme has been adopted, to proceed actively with the work of developing the extensive bodies of reefs which run for nine miles through the various properties of the Randfontein Estates Company, and further subsidiary companies will be formed as the work progresses. It is also intended to add considerably to the plantations now upon the estates. At present there are about 500,000 gum trees of 12 varieties, a large portion of which will be ready for felling in about 18 months' time. These trees are in great demand for rough timbering the Rand Mines, and the plantations are undoubtedly a very valuable and annually increasing asset of the company. The directors take this opportunity of informing shareholders that bearer warrants with dividend coupons attached are ready for issue in exchange for share certificates, and may be obtained on application to the London agents of the company, 8, Princes Street, London, E.C.

Graskop (Limited).

A circular has been issued by the directors of the Graskop (Limited) giving an account of the present position of the company's affairs. Negotiations are and have been for some time in progress with the Transvaal Government with a view of obtaining a reduction of the rent charge of £1000. In an interview between the Minister of Mines and the Chairman of the company, which took place in August at Pretoria, the Minister (Mr. Joubert) said his decision upon the matter would be arrived at after the local mine inspector had reported upon the property. No order for the inspection was transmitted to the local inspector, and in a subsequent interview the minister expressed his intention of visiting the property himself. The Minister of Mines, some time afterwards, visited a place about 12 miles away, but, owing to bad weather, was obliged to return to Pretoria without having made the inspection. This has been a great disappointment to the board of directors, but they hope that a decision will shortly be given in the matter. The mine itself, which is a good deal of the nature of an open quarry, and is situated on the top of a mountain some 5500 feet high, is 2½ miles distant from the mill. In the old method of working the ore was thrown by Kaffir labour from platform to platform until it reached the ground level. From thence it was carted in bags by ox-wagons to the mill. This entailed a large additional cost. By the newly-constructed tramway, the upper portion of which was completed in September last, the ore is run out by a deep cutting, the expense of shovelling it from stage to stage being thus obviated. The directors are strongly of opinion that it would be unwise to recommence working the mine without completing the tramway right down to the mill. Accordingly, the manager was instructed to complete the tramway with the utmost expedition, and it is expected that everything will be ready for laying additional railings by the beginning of March. The cost of the tramway was expected to be about £4500, and until it is completed the board do not intend to resume crushing to any extent. An outlay of £150 had been authorised to put the dam and aqueduct into proper repair. At present the milling power consists of 20 head of stamps and one Huntington mill. The mill worked so well that the board thought it advisable to accede to the manager's request that an additional one should be built. The board regret that such a long delay had been occasioned before recommencing milling, but they are satisfied that everything necessary is being done for the development and working of the mine, and they consider that when once the tramway is open the work should proceed continuously. There is a large mass of ore in sight and immediately the mill is completed it will be sent down for crushing.

Sutherland Reef (Limited).

The directors have issued a circular, in which they state that Mr. Procter, a member of the board, on his arrival at Johannesburg, selected Mr. Geo. Stephens, of St. Blazey Gate, Cornwall, who was formerly in the employ of the City and Suburban Gold Mining Company, and subsequently acted as manager to the Spes Bona Gold Mining Company (Limited) to accompany

him to the mine to inspect and report upon same, with a view to his appointment to succeed Mr. H. Mockford if, after examination of the property, he was sufficiently satisfied with the prospects to undertake the management. After inspection of the mine, Mr. Stephens accepted the post of manager, and arrangements were made with Mr. H. Mockford to at once place the mine in Mr. Stephens' charge. After three weeks' investigation Mr. Stephens prepared a report, which is also issued. Mr. Procter informs the board that he is highly pleased with the mine, and considers the company have a very valuable property, and that there is ample room upon it for "two other large companies should ours prove a success." Mr. Stephens reports the Saturday Reef to be well defined from the 200 feet to 300 feet level, of about 3 feet in width. He says it will mill 1 ounce per ton, and anticipates that the disturbed ground met with in the upper levels has now been passed through. He also finds that the new reef pans from 8 to 10 dwts. per ton. The directors have been informed by Mr. H. Mockford that the new reef is the best defined and strongest reef upon the property, and this should, therefore, hereafter prove of considerable value if the cost of working is found to be low. It is Mr. Stephens' intention to work at present only upon the Saturday reef. We are informed that the address of the company is at Dashwood House not Budge Row.

La Yesca Gold and Silver Mines.

The following circular has been issued to the shareholders:—The directors have much pleasure in, at last, being able to report a satisfactory settlement of the long outstanding claims of the vendor after protracted negotiations and the removal thereby of a difficulty which has hitherto seriously delayed progress of work at the mines. The embargo obtained by the vendor when pressing for a settlement of his claims has been removed. The company is registered under the Mexican Mining Laws, and is in possession of the property. The Liverpool debentures, placed by the late board on very onerous terms as regards net crushings (25 per cent. to go to the holders and 25 per cent. to the trustees for 250 working days) having matured, and payment being pressed for by the holders, the directors paid them off and by so doing removed a liability likely to prove a serious drawback. Loans obtained by the directors of the former company (amounting to £300), expenses of registering the company and carrying through the reconstruction, which were provided by large shareholders without charge, have also been repaid. The reconstruction was carried through without any expense being incurred for underwriting. At the statutory meeting in September last it was stated by the Chairman that the appointment of a competent mining engineer was contemplated by the board. After much deliberation Captain Thomas Michell, a mining engineer of considerable experience, was appointed, who proceeded to and inspected the mines, accompanied by Messrs. Platt and Padilla. Captain Michell states in his report, that only a moderate outlay will be required for completion of the mill, repairing tramway, stores, &c., to put the mines in thorough working order. The directors much appreciate the forbearance and confidence accorded them in response to the request of the Chairman at the general meeting, in their endeavours, under very great difficulties, to place the company in a sound position, and in making a call of sixpence per share feel assured that, considering what has been accomplished since allotment, they will have the approval and support of the shareholders.

The Harquahala Gold Mining Company.

The secretary of this company has issued a circular, dated January 23, from which we extract as follows:—"I am instructed by the board of directors to inform you that the profits for the quarter ending December 31, 1893, would allow of the payment of a dividend of 3d. per share, besides providing for all mining and other expenses up to the end of February next, by which time, if not sooner, it is fully expected the mill will be again at work. They, however, consider it the better policy, under the circumstances, to carry the amount forward to the current quarter. I am further directed by the board to give you particulars of some important developments in the mines, contained in letters and cables from the manager just received."

Victory (Charters Towers) Gold Mining Company.

The directors' report for the half-year to October 31, presented to the shareholders at Sydney on the 21st ult., states that during the six months 5608 tons from the Brilliant Reef yielded 17,202 ounces of the value of £80,257, and that 1280 tons of Victory Reef stone gave 1788 ounces of the value of £8167. The old company handed over £8227 of gold at the time of the reconstruction, and £637 has been obtained by the sale of concentrates. The amount distributed among the shareholders was £50,000, or 100 per cent. for the half-year; while, in addition, the company has bought a 15 stamp battery for £4000, which will, it is estimated, reduce the expenses by 3s. a ton.

Teutonia Gold Mining Company.

The directors, in their report, state:—"The erection of the new battery engine referred to in the previous report having been completed towards the end of October, crushing operations were resumed on November 1, 1892, and were carried on until February, 1893, with the following result:—November, 1892, 1905 tons, 561.6 ounces gold; December, 1892, 1474 tons, 544.8 ounces gold; January, 1893, 1463 tons, 372.85 ounces gold; February, 1893, 867 tons, 242.5 ounces gold; total, 5709 tons, 1721.75 ounces gold, which, together with the previous crushings since December, 1891, give a total of 12,780 tons crushed, yielding 5116 ounces 1 dwts., or an average of 8 dwts. per ton." The loss on the year's working amounts to £636.

—The ORO PRETO GOLD MINES OF BRAZIL (LIMITED) has sold the gold obtained in the month of November, which realised £4010 7s. 1d.

—THE NEW QUEEN GOLD MINING COMPANY (LIMITED) notifies that the gold received per *ss. India* was sold through Johnson, Matthey, and Co. (Limited), and realised £3680 17s. 8d.

—The secretary of the ISLE OF MAN MINING COMPANY sold on January 20th 100 tons of the company's ore at £7 2s. per ton.

—A dividend of 6d. per share has been declared by the VICTORIA GOLD MINING ASSOCIATION (Charters Towers), payable on and after 7th proximo.

—THE MYSORE WEST AND MYSORE WYNAD COMPANIES have sold through Messrs. N. M. Rothschild and Sons the gold obtained from the first trial crushing, which realised £148 2s. 7d.

—The half yearly general meeting of the PAARL CENTRAL GOLD MINING AND EXPLORATION COMPANY (LIMITED) will be held at Johannesburg on 21st February, 1894. The transfer register will be closed from the 14th to the 21st February, both days inclusive.

—The first ordinary general meeting of the shareholders of the RAND MINES (LIMITED) will be held at Johannesburg on 22nd February, 1894. The transfer registers will be closed from the 1st to the 7th February, both days inclusive.

—The *ss. Rosa Mary* sailed from Santander on the 19th inst. with a cargo of the SAN SALVADOR SPANISH IRON ORE COMPANY's ore for Middleboro'.

—Mr. A. A. WALTON, consulting and mining engineer, has removed from 8, Finch Lane, to his new offices, 8, Drapers' Gardens, E.C.

RAILWAY COMPANIES.

Great Eastern Railway Company.

The report of the directors of the Great Eastern Railway Company for the half-year ended December 31, 1893, shows a gross revenue from all sources of £2,237,248, against a gross revenue of £2,373,246 in the corresponding half-year of 1892. The working expenses have been £1,309,308, being at the rate of 58.52 per cent. on the gross revenue, against £1,325,890, being at the rate of 55.87 per cent. for the corresponding half-year of 1892. From the total net revenue of £927,938, including (1) £5484 brought forward from last account, (2) £5868 for dividends on shares held by the company, and (3) £3464 for bankers' and general interest there will be payable for Metropolitan stock £16,250 for rent-charge stock £9561, for rental of leased lines £126,759, and for interest on debentures and debenture stocks, &c. (inclusive of the sums carried to the redemption fund), £298,652, leaving £491,532 available for dividend. This sum of £491,532 leaves, after payment of the dividends on the guaranteed and preference stocks for the past half year, a balance of £122,789, against a balance of £260,095 in 1892. The directors have resolved, out of the above balance of £122,789, to declare a dividend for the half year on the ordinary stock at the rate of 1½ per cent. per annum, leaving a balance of £44,208 to be carried forward to the next account, against a balance of £40,070 carried forward in the corresponding half year of 1892, after payment for the half year of a dividend on the ordinary stock at the rate of 3½ per cent. per annum. The dividends on all the preference stocks, contingent as well as guaranteed, will be paid on February 1 next, and the dividend on the ordinary stock on the 15th day of the same month. "The above serious decrease in the revenue of the company, and the consequent decrease in the dividend on the ordinary stock, is due mainly to the disturbances which prevailed for 16 weeks in the colliery districts from which this company draws its supplies of fuel. These disturbances injuriously affected the company in two ways: (1) from the loss of 699,861 tons of coal traffic, involving revenue receipts of no less than £118,680, as compared with the corresponding half-year and (2) from the increased cost of the coal purchased for the locomotive and other departments of the company. Although the number of train miles run during the half year shows a decrease of 718,469 miles, there has been an increase in the cost of coal consumed in the locomotive department alone of £34,516. In the gross revenue there is an increase of £8363 from coaching traffic, a decrease of £33,425 from merchandise traffic, a decrease of £118,680 from coal traffic, a decrease of £3493 from cattle traffic, and an increase of £8920 from continental traffic. The decrease in the merchandise traffic arises from depressed trade generally, and from the partial failure of the harvest in the eastern counties last year. The decrease in coal traffic resulted from the coal disturbances above referred to, and the decrease in cattle traffic from the scarcity of food following the drought of last summer. The result of the working of the new continental route, via the Hook of Holland, has realised the anticipation of the directors.

The London and South Western Railway Company.

The directors of the London and South Western Railway Company recommend a dividend for the half year ended 31st December, 1893, at the rate of 7½ per cent. per annum on the original ordinary stock, the full dividend at the rate of 4 per cent. per annum for the half-year on the preferred converted ordinary stock, and 2 per cent. for the whole year on the deferred converted ordinary stock. The dividend of 7½ per cent. on the ordinary stock compares with 7½ per cent. for the corresponding period of 1892, and the balance of net revenue carried forward is £19,958, as compared with £22,462 at this time last year.

Chatham and Dover Railway Company.

The accounts of the London, Chatham and Dover Railway for the past half-year, subject to the completion of the audit, show a balance of £151,457 8s. available for dividend. The directors will propose that a dividend of £2 5s. per cent. for the half-year be paid on the arbitration preference stock, carrying forward £1028 1s. 10d. to the credit of the current half-year.

City and South London Railway Company.

The receipts from all sources for the past half year have amounted to £22,821 7s. 9d., and the cost of working has been £14,761 11s. 3d., leaving a profit of £8059 16s. 6d. Inclusive of the balance brought forward from June 30 last the net revenue account shows an aggregate total of £8927 10s. 7d. After making provision for the debenture and debenture stock interest a balance remains available for dividend of £4792 8s. 10d. Out of this sum the directors recommend that the full dividend of 5 per cent. per annum be paid on the preference shares, and that a dividend at the rate of ½ per cent. per annum be paid upon the consolidated ordinary stock, leaving a balance of £1063 13s. 10d. to be carried forward to the next account. The following table shows the number of passengers, exclusive of season-ticket holders, carried since the opening of the railway in each half-year:—

Half-year.	Number of passengers.	Receipts including Season Tickets.
Ended December 31, 1890 (11 days).....	155,000	£1,548 3 9
" June 30, 1891	2,412,343	19,403 6 9
" December 31, 1891	2,749,053	15,798 16 6
" June 30, 1892	2,613,162	20,321 4 2
" December 31, 1892	3,117,602	22,002 17 5
" June 30, 1893	3,146,656	22,459 6 9
" December 31, 1893	3,893,351	22,057 14 10
Total since the opening of the line.....	17,497,169	£128,233 10 2

THE MATABELE WAR.—News came to hand early in the week that Lobengula with a few followers was entrenched in the Fly Country, close to the Zambesi. Frequent communication was passing between him and Dr. Jameson, through native runners. Some thousands of men still remain faithful to the king, and it is believed that the influence of his indunas has been exerted to deter him from surrendering. Later reports of the defence of Major Wilson and his little following before they were overpowered by numbers show it to have been a thoroughly gallant and soldier-like achievement. Careful searches will be made upon the site of the contest for any traces—especially for any written messages—which may have been left by the brave little party; although but few hopes are entertained of finding anything. It is now known that the force sent by Lobengula to oppose Colonel Gold-Adams consisted of half the entire military strength of the nation, and numbered about 8000 men in all. There has been much talk of the King's surrender and Sir Henry Loch has sent what are thought to be liberal offers in the hope of bringing the campaign to a definite conclusion, but at present nothing very definite is known as to this matter. The country is now pretty quiet and the pegging out of mining claims is proceeding vigorously. Numerous old gold workings have been discovered. The camp at Bulawayo is said to be pretty healthy.

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LONDON: JANUARY 27, 1894.

THE METHODS OF GOLD MINING AND ITS PROSPECTS.

THE revival which seems imminent in the general tone of
 finance should early extend a strong influence to the market
 for gold mining shares. There are not many branches of
 speculative undertaking which afford so strong an inducement to
 capitalists. American rails, which have been very much sought
 after in times past, are only now beginning to recover from a long
 depression, while there are many causes at work to restrict
 speculation in home industrial securities, in foreign bonds, and,
 indeed, in most other classes of the money market. Meanwhile,
 the advance which has taken place in the character of mining
 enterprise has given the public a much more favourable view of
 this outlet for their spare capital. Improvements in technical
 and financial management have opened up vast new opportuni-
 ties for the auriferous industry, under conditions much less

hazardous than have prevailed in the past. There are those who
 claim that the working of "banket" reefs in no way deserves
 the name of speculation, and though so much as this can hardly
 be said there is no doubt that the result achieved upon the Wit-
 watersrandt has vastly simplified and assured the working of
 gold quartz. In the past seven years, notwithstanding the
 many scandals and drawbacks which have attended its develop-
 ment, the great Transvaal goldfield has reached an output at the
 rate of six millions sterling per year, and for 1893 the divi-
 dends paid represent a total of nearly one million sterling.
 With the opportunities which abound for applying the lessons
 learned on the Rand to other gold deposits, it is only to be
 expected that there will be a large diversion of British capital
 into this form of enterprise. There is a vast volume of work to
 be done in this direction, and in places peculiarly within the
 sphere of the London financier. In Australia and India, for
 instance, there are enormous deposits of low grade ores which
 can, in all probability, be profitably dealt with upon modern
 lines, while the auriferous wealth of Canada has yet to attract
 the notice of capitalists at home. In British Guiana the results
 so far obtained by the employment of modern plant and methods
 are eminently encouraging for their further application. When
 the auriferous resources of this colony are better known among
 the investing public there is no doubt that a great deal of
 money will be sunk in an industry which has, during the past
 two or three years, yielded such profitable returns. The con-
 quest of the Matabele in South Africa has likewise opened up
 a new field for the prospector and miner, and there is room
 for a large outlay of capital in deep level mining on the Rand
 and in the working of the several other gold fields in the
 Transvaal, Zululand, and in Mozambique. The consent of the
 Transvaal Volksraad to the construction of a railway between
 Potchefstroom and Klerksdorp will do much towards this end,
 and there is good reason for hoping that with the rapid ex-
 tension of the Delagoa Bay line the De Kaap Gold Field
 will once more experience a period of activity and
 development. In Western Australia again the finds
 of gold are very promising, and an auriferous industry
 would have been before now in active exploration if the monetary
 disorders of our Antipodean possessions had not held back every
 form of enterprise. In South America also, in Chili, and Peru
 especially, there are extensive deposits of poor and refractory
 quartz which can no doubt be turned to good account if the
 latest scientific knowledge, supported by abundant capital, is
 applied to the work. In fact, the improvements that have been
 made to the processes of gold extraction have practically doubled
 or trebled the area of known placer and quartz mines capable of
 being worked at a profit, to say nothing of the vast deposits of
 the precious metal that probably exist in countries that are only
 now being opened up to civilisation.

While there is so large an opening for new enterprise, how-
 ever, it cannot be said that there is at present any strong inclina-
 tion on the part of the British public to lay out its money in
 the purchase of gold mining shares. Within the past week or
 two there has been an upward movement in the market for
 South African and Indian gold mining shares, but speaking
 generally, the demand has only referred to the scrip of companies
 which are already in a position to pay dividends. It is only natural,
 of course, that improvement should begin with the gilt-edged
 securities, and it may be that as soon as prices for these reach a
 certain level attention will be directed to the whole body of gold
 mining companies. At the same time it must be admitted that
 even as a speculation this class of securities is not in especially good
 repute, and that there are substantial reasons why suspicions
 should prevail among stock and share buyers. While the methods
 of auriferous mining have been vastly improved by the experi-
 ence acquired in the development of the Witwatersrand gold
 mines so much can scarcely be said of the financial side of their
 management. There has been so much jugglery with capital
 and expenditure, so constant a series of reconstructions, so
 continual a failure to foresee necessary outlay, that no
 wonder a feeling of mistrust has been excited over here. Some
 of the transactions which have taken place in connection with some
 of the Rand gold mines would, we believe, be speedily quashed
 if they came before a Court of Law. Directors have shown not the
 slightest regard for shareholders' interests, and in some cases have
 paid them not even the compliment of pretending to consult them
 before ruinously disposing of their property. Again, the relations
 between vendor and director have been so closely mixed up as to
 render many a purchase anything but a *bona fide* bargain, and some
 of the most recent transactions carried out in respect to the acqui-
 sition of deep level properties have been excellent examples of
 "nursing," a thing up to an extravagant value. The fact is that if
 the Rand mines are to secure the "boom" which has been so long
 and so eagerly awaited any reform must be internal as well as
 directed to the reduction of working expenses. An altera-
 tion in the laws of the Republic making directors
 much more responsible than they are at present to
 shareholders would have an excellent effect, and the
 Chamber of Mines might do a great deal to institute a higher
 tone of commercial morality. At present, Johannesburg teems
 with reflections upon the character of a large number of its lead-
 ing men. It would be vain to ignore this, or the effect which it
 has produced upon home speculation in Transvaal mining shares.
 That there is money forthcoming for mining concerns in whose
 management confidence is felt is proved by the demand for the
 recent issue of debentures by the Consolidated Goldfields. There
 is a larger class than ever before waiting to go into the market,
 for Continental as well as British; capitalists have been attracted
 by the steady rise in the output, but speculators would like
 to see some assurance of fair treatment. We cannot advise
 Rand promoters and directors better than to check the contin-
 ual crop of reconstructions, and to inspire confidence by
 managing their concerns with honesty as well as intelligence.
 The richness of the gold field, as well as its probable duration

are such that they can afford to sacrifice some present profit for the sake of the future.

The activity of invention in respect to gold mining methods, to which we have alluded, is one of the most promising indications of vitality in that branch of enterprise. The enormous salaries that are being paid to consulting engineers to suggest the proper means of carrying on the development of mines are only one proof of the growth of the scientific element in mining. New processes for extracting the precious metal from the ore are being tried on every gold field in the world, and out of this continual experimenting a certain distinct advance upon the methods now employed must necessarily result. Electrical transmission forms an integral part of every new gold mining plant, and has put into the hands of managers and engineers a splendid means of centralising power, and thereby reducing cost. In crushing machinery progress has been most rapid, and stamps are now being made weighing 1100 lbs. Triple expansion engines, multitubular boilers, rock drills worked by compressed air are now part of the equipment of every mine of importance. The extension of the mining industry becomes, therefore, a more and more valuable circumstance for engineers and machinists. Happily, English firms continue to hold their own against the rivalry of American and other foreign makers. One British firm has sent out more than 2000 heads of gold stamps within the past five years to every part of the world, and the works which have made a speciality of engines and boilers for mining purposes are nearly always fully occupied. This is a tendency which is certain to increase, for it becomes more and more evident that the secret of modern gold mining is to apply capital to the treatment of ore upon a larger scale. The enormous improvement that has taken place in the yield of gold on the Rand is due to the enterprise of those companies who have laid down plant capable of treating the greatest possible amount of quartz. The wisdom of this policy was at one time questioned by those who considered that so much power could not be used economically, chiefly upon the ground that it was very difficult to keep the stamps fed to their full capacity, and that when such an enormous quantity of quartz was crushed it was practically impossible to secure a high percentage of the precious metal. This after all is a question of expediency, and where quartz is abundant and easily accessible it can no doubt be more profitably treated by this way than by any other. If it were not so it is not likely that the returns upon the Rand during the past few years would have shown such an extraordinary development of mining. At the same time, it must be admitted that the crushed ore is not so thoroughly treated as it would be if dealt with upon a smaller scale, and the tailings no doubt contain a large proportion of the precious metal which is capable of being extracted by the cyanide and other chemical processes now coming into vogue. Such enormous installations can, however, only be laid down upon fields in which prolific reefs of gold have been opened up, and in the working of new auriferous territories it will still be necessary to employ machinery of smaller capacity, especially if, as is generally the case under such circumstances, the cost of transport should be particularly high. For all classes of gold crushing machinery, therefore, there is likely during the next few years to be a heavy demand, and it is satisfactory to know that British firms are fully prepared to take their share of the work.

NOTES AND COMMENTS.

ALTHOUGH the past week has been anything but a bright and busy one in City circles, still its tone shows some improvement on that which characterised the previous week. That we know is not saying a great deal, but still any perceptible degree of improvement is encouraging nowadays, when the commercial barometer seems to have developed a chronic state of depression. In the discount market on Monday there was a distinctly firmer tendency, although "short money" was far from abundant; and by Wednesday the upward tendency in the discount rates became accentuated. These and some other circumstances have led to a lot of talk in the City as to the wisdom, or unwisdom, according to the way one looks upon the matter, of the action of the directors of the Bank of England last week in maintaining their three per cent. minimum rate of discount. Opinion has been pretty equally divided upon the subject, but there has been a pronounced feeling in some influential quarters as to the desirability of the Bank rate being further reduced with a view to facilitate the success of the new issue of India bills.

The acquisition of a large additional property by the Village Main Reef Gold Mining Company has necessarily entailed upon the directors the expenditure of a large additional sum upon capital account, and to meet that it was decided at an extraordinary meeting of the company, held on Tuesday last, to create 48,000 more shares of £1 each. The improved outputs of the past two months must have raised the spirits of the shareholders and led them to compare their own mines with others in the same district whose fabulous dividends, speaking comparatively, have been largely responsible for the speculative spirit amongst English mining men. The past has been a time of difficulty for the directors, and now that they have passed through it and a time of comparative ease and prosperity—perhaps of wealthiness—lies before them, they can reflect that the contentment which must characterise their habit of mind is partly due to the care with which, since the inception of the enterprise, they have guarded its interests.

We shall be hearing more of the coal-in-Kent question shortly, it would seem. At all events an important discovery of coal has been made at Forest Row, Kent. A party of workmen, while engaged in sinking a well, came upon a thick seam of coal. This is the second discovery of the kind in the county, a similar seam

having been struck in some brickfields on the borders of Kent and Sussex. Samples of the fuel have, we understand, been tested by specialists with satisfactory results. It is believed that coal exists in large quantities in East Kent, and a committee of county gentlemen has been formed for the purpose of prosecuting experiments with a view to opening up coal fields. Sir Edward Watkin is, therefore, not alone in his desire to transform our great hop garden into a black country.

There is a good deal to be said both for and against the system of railway rates which at present obtains in this country, and which has been so fruitful of agitation; but there can only be one opinion as to what should be done were cases like that just reported by the *Midland Evening News* to be of every day occurrence. The incident referred to is thus reported by our contemporary:—

Considerable commotion was created among the officials of Shrewsbury Railway Station by the arrival at the station of a lady passenger of extraordinary size, who was on her way to Chester. She was built on such very broad lines that it was impossible for her to get into an ordinary railway carriage, and she arrived in some other kind of railway rolling stock. When the time for her departure came she had to be accommodated with a chair half-way across the platform, as she was unable to walk even the short distance from the waiting room to the train, where she was placed in one of the luggage compartments. The weight of the lady was stated to be 32 st. 8 lbs.

Probably something like this would have to be provided against were his Royal Highness King Lobengula induced to pay our Queen and country a visit.

Mr. R. D. Oldham's recent lecture at the Imperial Institute upon "The Petroleum Fields of India" was aptly described by a critic, himself no inconsiderable authority upon the subject, as a valuable sort of communication. The justification for that remark is not far to seek. So long as the oil-fields of India were regarded as mere freaks of nature, that vague and mystical entity long credited by the unscientific mind with successions of vagaries and indiscretions perpetrated at random, no satisfactory progress was likely to be made in their development. Now that the scientist has come along and can see behind these seemingly unconnected phenomena a glorious unity and a harmonious plan—Nature working, not with the petulant inconsistency of a child, but in conformity with that noble design spread throughout all her domains—the operations of the future will be carried out with a much greater hope of success than ever characterised them before. The lecturer took occasion to condemn in a sly manner, carrying an additional force, what has been humorously termed the "sublime cocksureness" of the man of science. It is easy to see that the condemnation, once too just, of the dogmatic position assumed by the wielder of the geological hammer, is losing much of its fitness; the geologist, like the celebrated French astronomer, having a more frequent recourse to the modest and well-judged reply "I don't know." Mr. Oldham, himself, is a forcible instance of this. The mild and fair tone running throughout his paper could hardly have been exceeded. He is not unduly optimistic as to the future of that part of the Indian Empire which may be called "oily," and upon that account the moderate but welcome hopes which he has been able to hold out to us are the more satisfying.

In view of the lessened production and low selling values of minerals and metals in other countries the report of the French Statistical Commission upon the mineral and metallurgical industries of France during 1892 possesses many encouraging features. This report shows that the total amount of bituminous coal, anthracite, and lignite extracted in that period was 26,179,000 tons, an increase, as compared with the previous year, of 154,000 tons. This improvement, though small, is yet satisfactory when it is remembered that in Belgium the production declined 93,000 tons, in Germany 1,707,000 tons, and in England 3,752,000 tons. Under these circumstances there was a general decline in the values of fuel. At the pit banks in the Nord and in the Pas de Calais the price of coal fell 1.47 fr. per ton, but this scarcely affected at all the price to the consumer, who paid 12.40 fr., which was nearly 2 fr. higher than was paid during the years 1885 to 1889. Notwithstanding this depreciation of fuel the wages of the miners advanced during 1892, and the cost of bringing the fuel to bank was consequently higher. Owing to the four months' strike at Carmaux the production of coal in that district largely declined, but in the Pas de Calais the total out-turn was 9,802,000 tons, an increase of 1,181,000 tons. For the same reason, of the 294 collieries working no fewer than 136 were unable to make a profit upon the year's operations. By adding to the quantity of coal brought to bank the amount of iron ore, lead, silver, zinc, manganese, antimony, and other minerals mined in France, the total production of minerals during 1892 is increased to 30,287,000 tons, having a value at the mines of £14,361,920, as compared with a production of 30,050,000 tons in 1891 and a value of £15,214,000. There were very few serious accidents in the mines, a result which was probably due to the special precautions that are now taken to avoid them. For the first time during 50 years there was no death from fire damp.

Under the head of metallurgical works the report states that in 1892 the blast furnaces produced 2,057,000 tons of pig iron, an increase, as compared with the previous year, of 160,000 tons. Manufactured steel likewise augmented in the same period from 638,000 tons to 682,500 tons. Finished iron totalled 829,000 tons, which was a diminution of 4000 tons. Prices of finished iron and steel were unchanged, but the values of pig iron underwent a decline. In consequence of the activity at the blast furnaces and steel works the total value of metallurgical products was £18,280,000, an increase on the year of £720,000. It is pointed out in the report that the production of pig iron had increased also in Germany, Austria, Belgium, Russia, and especially in the United States. Upon the other hand pig iron in England underwent a serious diminution. The employment of steam boilers in France likewise largely increased. In works upon the railways, and in boats the total

number of steam boilers used was 89,116, and these had been submitted to 23,871 official tests by means of hydraulic presses. These statistics of minerals, metals, and boilers in 1892 are likely to be still further improved when the report for 1893 comes to be published, as, owing to the rapidly increasing home consumption, there has been not only more activity in mineral, pig iron, and steel production, but a vast amount of money has been spent in augmenting the capacity of the finished steel works.

The Exploration Company is in the throes of maternity with an interesting and seemingly robust offspring, to be christened "The South African and General Association (Limited)." The latest addition to the rather large family of subsidiary companies living beneath the motherly care of this rather prolific parent has come into the world with every auspicious circumstance. Even from the resolution, which is the author of its existence, it can be seen that the experienced men of business in whose brains it originated, are fully determined to bring it to a successful and vigorous prime of life, and the circumstance obviously augurs well for the young South African Association. Annual meetings of the Exploration Company differ widely in tone and spirit from those of other similar undertakings. A peaceful and satisfied air broods over them, which intensifies itself, as Sir Horace Farquhar enumerates, with pardonable complacency, the dividends that have been paid in the past, and those that, are likely to be paid in the future. It remains to hope that the same contented frame of mind may be apparent at many successive general meetings of the South African and General Association (Limited), whose career will be watched with interest.

If short hours, high wages, and expensive safety conditions of employment are to prevail in England they should also prevail on the Continent, unless this country is to be at the mercy of her European competitors. With 10 and 12 hours a day being worked in Belgium and German mines, and 30 per cent. to 35 per cent. lower wages being paid in German iron and steel mills than is the case here, how can it be that English manufacturers should hold their own? Again and again the Miners' Federation have been told that if they would make their movement international, British iron and coal masters would have less to complain of. It is their failure to do this which makes the present position of British employers burdensome. It is all very well for the colliers to say that the coalmasters can obtain better prices if they like. Look at the difficulty which at this moment the Yorkshire coal owners are experiencing in attempting to secure higher contract rates from the railway companies and the gas companies. It is true that a few of the companies are understood to have consented to the owners' terms, but the rest are standing out like adamant against any advance. With respect to gas coal contracts indeed many of the companies seem to be inclined to follow the lines adopted last year, and to purchase in the open market.

To the ironmasters, steelmasters, and other metalliferous producers of this country any organised attempt to raise quotations to recoup themselves for the increasing demands of the workmen is absolutely impossible. Already the Belgians are sending iron into England and Scotland, and the Germans steel at considerably under English prices. Any attempt to rush values would be immediately followed by such a placing of English contracts abroad as has never before been witnessed. Labour demagogues find it convenient to forget all this. They also never read—or, at any rate, we never hear them referred to—the reports of our public companies in the mining and manufacturing industries showing heavy losses on the year's trading. Not only public companies, but very many private individuals engaged in the metalliferous industries, have made no profits during the past year. This is a matter of common knowledge, and relates to all parts of the kingdom. Yet the work-people are still enforcing their demands. Of course we have a reduced American tariff to look forward to, which will assist us a little as the year gets on, and the financial condition of some of the foreign markets is perhaps slowly improving. But it will be too late for labour to cry out when trade has been handed over to our competitors.

The opening up of new markets is the remedy which Mr. Chamberlain would prescribe for the present state of trade in this country. Speaking at Birmingham this week he emphasised this point in the commercial outlook above all others. More employment can, he states, be the result only of more demand, and unless this is obtained, revival cannot be guaranteed in business circles. On account of its value to Great Britain as a customer, he explains that we should never lose the hold which we now have over our great Indian dependency—by far the largest and most valuable of all the markets we have, or ever shall have. For the same reason Egypt should continue to be occupied. Mr. Chamberlain seems to entertain great expectations of the future of Africa as a market. Every legitimate opportunity should, he declares, be used to extend England's influence and control in the African Continent, and he is especially anxious to see the long-talked-of railway constructed from the coast to Uganda, a distance of 800 miles. The building of such a line would, he believes, result in opening out a magnificent new country for British manufactures. These are sentiments which have the right ring about them, and they will meet with a hearty response in all the manufacturing centres.

There have been rumours floating about for some time to the effect that the formation of a new Alkali Syndicate was imminent, and we were not, therefore, surprised to see the *Liverpool Journal of Commerce* on Thursday boldly announcing its advent. The *raison d'être* of the new syndicate is to promote a company to manufacture various alkalies, but they evidently intend to do more than that, as they have, it is reported, purchased land containing both salt and coal mines. Even big syndicates are sometimes wise enough to see that it is not always wise to put all one's eggs into one basket.

OUR CITY ARTICLE.

FRIDAY EVENING.

THE MINING MARKET.

A poor Week for Kaffirs.—A succession of declines.—One or two prominent exceptions.
—Land Securities firm.—Indian and Miscellaneous active.

UNFORTUNATELY, the active tone which characterised the Kaffir market last week has not extended to this week. The hopes indulged in that this activity had come to stay, at any rate for some time, have been unrealised. The reason for this sudden change can, no doubt, be accounted for by the fact that buyers are surfeited, at least for a time, and that they are content for the present with the purchases they have made. Another reason for the slump was a sharp decline, in the early portion of the week, in De Beers, mainly on sales from the Continent. But as the distrust which news from Mashonaland created gradually subsided the shares improved, and had a marked effect upon the other portion of the South African market. The downward tendency of the Kaffir section was consequently arrested, and though business has not been on a very active scale, it has been sufficient to harden the tone. One of the conspicuous features of this market has been the buying of Sutherland Reef, the shares improving one shilling in two days. This is consequent, probably, upon the letter of Mr. Procter and the report of Mr. George Stephens, who has taken over the management of the mine. The latter reports that the Saturday Reef is well defined from the 200 feet to 300 feet level; that it is about 3 feet in width, and will mill 1 ounce per ton. He also finds that the New Reef pans from 8 to 10 dwts. per ton. Happily, the Miscellaneous Market has been most active this week. Indians especially have been most buoyant, notwithstanding that at the close they exhibited a slightly weaker tone. At the beginning of the week a considerable amount of business was reported in this market. A prominent feature has been the active tone exhibited in Poor-man Consolidated. There has also been a continued demand for Australian gold shares, though the business has not been conspicuous. Aladdin's Lamp has also attracted buyers and the shares have improved. The fortnightly return of 780 ounces out of 150 tons has come up to expectations, and actually beats the last yield reported. The telegram received this week states that the rich ore continues in the stopes above the 300 feet level, and that the manager has resumed the sinking of the "Jackass" shaft. The meetings this week have not been numerous or important. Amongst home mines that of Dolcoath is the most prominent, at which a dividend of 5s. was declared, which was less than anticipations. At the meeting of the Village Main Reef on Tuesday it was decided to increase the capital in order to meet the charges of developing the large additional properties which have recently been acquired.

British Mines.

The Cornish market has been quiet this week, and on the whole business very limited, but at times there has been a disposition to buy, which will probably be further developed when tin makes an upward move. The Dolcoath meeting was very disappointing, but the manager's explanation was considered satisfactory. The shares close 69½ to 70½ ex. div. of 5s. Killifreth have been freely dealt in between 68s. and 69s., and the tendency is upwards. It is evident that the mine can be profitably worked even with tin at 45. South Crofty are about 41s. The prospects are good and the mine is being vigorously developed. West Kitty's have been offered at 7½. Wheel Friendly and Polberro have been enquired for. Carn Brea are steady at 13. Wheel Grenville firm at 14, but no shares offering.—Risen: Cook's Kitchen, 1s. 6d.; Dolcoath (allowing for dividend), 15s.; Killifreth, 2s. 6d.; South Crofty, 5s.; Wheel Agar, 5s.; Wheel Basset (allowing for call), ½.—Fallen: Tincroft, 5s.; West Frances, 2s. 6d.; West Kitty, 5s.; Wheel Friendly, 6d.

South African Shares.

The week opened dull for this market, and very little business was done. Consequently prices generally drooped owing to the absence of support. Meyer and Charlton and Goldenhuis Deep were exceptions to this dullness, the former improving ¼ and the prospect of better returns from the mine. The latter received attention on account of the excellent progress that has been made, the shares leaving off at 2½. A decline of ¼ took place in Pioneer and Stanhope, whilst Robinson, Salisbury, Simmer and Jack and Crown Reef fell ¼. A recovery of ¼ took place in Village Main Reef, but Goldenhuis Main Reef, Henry Nourse, New Primrose, and Knights were easier. Chartered were dull and unchanged, whilst Explorings, Oceanas, and Zambesis were easier. Diamond shares were flat, De Beers falling ¼, and Jagers receding ¼. There was no improvement in this market on Tuesday. Randt descriptions were again flat, though not seriously so. As on the previous day, Meyer and Charlton were the most conspicuous, the shares being exceptionally strong. The result of the day's business was a rise of ¼. There was also a firm tone exhibited in Village Main Reef and Ferreira. Cities, New Chimes, Durban Roodepoort, Henry Nourse, Heriot, Jubilee, and Goldenhuis suffered losses, as well as New Riets, Salisbury, Van Ryn, Wemmer, Langlaagte, and Nigel. Land descriptions were sold at about the same price as on the day previous, and there was no disposition to give more. There was a further selling of De Beers, which had a further depressing influence on the South African market. The continent was again the chief seller, but the movement spread to this side. The relapse on the day's selling amounted to ¼. Jagers were also affected and declined ¼. The following day witnessed no improvement amongst Randt shares. Owing to the proposed issue of fresh capital Henry Nourse receded about ¼, whilst New Rietfontein closed at 2½ owing to the prospect of closing the mill, consequent upon the further development of the mine. A decline of ¼ took place in Wemmer, Wolhuter, Jumpers, Ferreira, Robinson, Stanhope, and one or two others. Meyer and Charlton and Goldenhuis Deep, however, were firm, while Salisbury were slightly better. There was a further call for Sutherland Reef, which sent the shares up to 1s. 10½d. Chartered were much inquired for, the shares improving 9d., Consolidated Gold Fields hardening in sympathy. Amongst diamond shares De Beers improved, the shares leaving off ¼ better than on the previous day. On the other hand Jagers lost to that extent. Lately there has been quite a revival among the Kaffir shares, consequent upon the improvement in De Beers. The downward tendency of a number of the leading stocks has been arrested, and many of them have been bid to higher prices. Henry Nourse, Nigel, Robinson, Langlaagte, Durban, and even Stanhopes have all shared in the upward tendency, improvements being recorded in each. On the other hand Crown Reef and Heriot have relapsed, whilst Jumpers, Van Ryn, and Randfontein are the turn weaker. There has also been a further demand for Sutherland Reef the shares improving in consequence. De

Beers have made a further rally, as well as Jagers. Randt shares are also firm. The following are the week's changes:—Risen: Chartered, 1s. 6d.; Consolidated Gold Fields, 1s. 3d.; Exploring, 5s.; Goldenhuis Deep, 2s. 6d.; Johannesburg Trams, 6d.; Main Reef, 6d.; Modderfontein, 6d.; Princess Estate, 1s. 3d.; Sheba, 6d.; South African Gold Trust, 6d.; South Simmer and Jack, 1s. 3d.; Sutherland Reef, 1s. 3d.; Transvaal Estates, 6d.; Transvaal Exploration, 1s. 3d.; Aurora, 5s.; De Beers, 7s. 6d.; Exploration, 1s. 3d.; Goldenhuis Estate, 2s. 6d.; Goldenhuis Main Reef, 6d.; Glencairn, 6d.; Henry Nourse, 2s. 6d.; Heriot, 5s.; Joe's Luck, 1s.; Jumpers, 2s. 6d.; Luipaards Vlei, 2s.; Mashonaland Agency, 1s. 3d.; May Consolidated, 6d.; May Deep Level, 1s.; Moodies, 6d.; Mozambique, 2s. 6d.; New Chimes, 5s.; New Primrose, 2s. 6d.; Northern Transvaal Land, 6d.; Oceana Development, 2s. 6d.; Oceana Land, 2s. 6d.; Paarl Central, 6d.; Salisbury, 2s. 6d.; Simmer and Jack, 2s. 6d.; South African Exploration, 5s.; South African Trust and Finance, 6d.; Spes Bona, 1s. 3d.; Stanhope, 2s. 6d.; Transvaal Lands (15s. paid), 1s.; ditto (fully paid), 6d.; Village Main Reef, 2s. 6d.; Wemmer, 2s. 6d.; Witwatersrand Knights, 3s.—Dividend announced: Sheba, 6d.

Indian and Miscellaneous Shares.

In contradistinction to the South African market the week opened with an active tone, Indians especially improving. Champions were the most conspicuous, the shares going up to 3½. Mysore Reef improved 1s. Ooregum Preference rose ¼, but Balaghat, on the other hand, declined 6d. Amongst other miscellaneous securities the Broken Hill Proprietary relapsed ¼, and De Lamar and Elkhorn 6d. Poorman were strong. Amongst copper shares Rio Tinto remained unchanged, but Libiola recovered ½ and Namaqua ¼. This market again exhibited a cheerful tone on Tuesday, and business on the whole was on a very active scale. Champion Reefs were again the most conspicuous amongst the Indians, though most of the others exhibited a firm tone. Aladdin's improved ¼, as well as Broken Hill Proprietary. A rise of ½ took place in El Callao, but losses were recorded in Mills' Day Dawn, Mount Morgan, Don Pedro, Gravel Gold and Day Dawn Block. Glenrock, on the other hand, recovered to 2s. 3d. Rio Tinto closed ¼ lower, but Cape Copper recovered to that extent. This market remained steady on Wednesday, with the exception of copper shares, Rio Tinto declining ¼, Cape Copper ¼, and Libiola ½. The activity in this market continues. Amongst Indians, Ooregum have improved, but Nundydroog, Gold Fields, Mysore Reefs, and Balaghat are easier. Mills' Day Dawn, Elkhorn, and Poorman have rallied, but Rio Tinto remain unchanged. Cape Coppers are a turn weaker. Risen: British Broken Hill, 6d.; Champion Reefs, 3s. 9d.; El Callao, 2s. 6d.; Harquahala, 3s.; Libiola, 5s.; Mills' Day Dawn, 1s. 3d.; Mysore Reefs, 1s.; Ooregum, 2s. 6d.; ditto, preference, 5s.; Pahang Corporation, 1s.; Poorman, 6d.; Tolima A, 10s.; ditto, B, 10s. Fallen: Balaghat Mysore, 2s.; Brilliant, 1s.; Brilliant Block, 2s. 6d.; Brilliant St. George, 1s.; Craven's Caledonia, 6d.; De Lamar, 6d.; Don Pedro, 1s.; Gravel Gold, 6d.; Montana, 9d.; Mount Morgan, 2s. 6d.; Rio Tinto, 7s. 6d.; Sierra Buttes (Plumas Eureka), 9d.; Victory, 1s. 3d.; Wentworth Ordinary, 6d.—Dividend announced: Mills' Day Dawn, 3d.

THE STOCK MARKETS.

Steady rise in Home Railway Stocks.

One of the features of the week in this market has been the steady and persistent rise in home railway stocks. At the commencement they began to display firmness, and this has been continued up to the end. To-day there has been another advance in home railways on the announcement of the North Eastern dividend, which was not received until after business hours yesterday. The market expected last year's dividend to be maintained, but did not look for an improvement, and at the opening North Eastern Consols were put up nearly four points, but afterwards fell away a little. Consols are heavy and rupee paper has given way nearly a point. In the foreign Department Argentines have been weak, on a rise of four points in the gold premium, but other International stocks are well maintained. Bulgarians have advanced two points, and Italians are up about a half. American Railroads opened lower all round, but the tone has since improved, in spite of the set back in Milwaukee, and the public show more disposition to come in. Before the close Grand Trunks and Mexicans showed exceptional strength.

THE MONEY MARKET.

No alteration in the Bank's Standard for discounts.

The directors of the Bank of England made no alteration in their standard for discounts. The figures placed before them showed a position of unusual strength. The return showed that, including £35,000 gold received from abroad, the bullion rose last week £344,376, to £27,384,931; and as the note circulation ran down £453,970, the reserve was augmented by £1,298,346, to £19,261,141, while the proportion ran up 4.43 per cent., to 54.41. This time last year the reserve was nearly two millions less, the bullion one a half millions less, and the proportion 7 per cent. less, while the Bank standard was then lowered from 3 to 2½ per cent. The tax collections made during the past week enabled the Government to repay the Bank £1,400,000 of the advances for dividends, and at the same time to increase the deposits by £486,282, while, notwithstanding a reduction of £412,078 in the other securities, market deposits were lowered by £1,029,619. We append our usual table:—

ISSUE DEPARTMENT.		
Notes Issued	£41,699,980	
Government Debt	£11,015,100	
Other Securities	5,434,900	
Gold Coin and Bullion	£5,249,963	
Silver Bullion	—	
	£41,699,980	£41,699,980
BANKING DEPARTMENT.		
Proprietors' Capital	£14,553,800	
Reserve	3,463,875	
Public Deposits	5,813,340	
Other Deposits	£2,396,809	
Seven Days and other Bills	189,470	
	£23,416,103	£23,416,100

The return shows the following changes when compared with the previous statement:—Circulation Issues (Increase), £739,680; Circulation Active (decrease), £453,970; public deposits (Increase), £486,282; other deposits (decrease), £1,029,619; Government securities (decrease), £1,400,000; other securities (decrease), £412,078; coin and bullion (Increase), £344,376; seven days' and other bills (Increase), £279,741; rest (Increase), £21,651; notes in reserve (Increase), £1,193,650; total reserve (Increase), £1,298,346.

To-day there has not been much demand for short loans, but the available supplies are getting reduced, and business has been generally refused under one per cent. Money is not by any means scarce, but brokers are getting cautious, and discount rates are quoted firm at two per cent. The S.S. Carthage has left with £5000 in gold and £174,480 for Bombay and the East. No movements of bullion were recorded at the Bank.

THE London, Walthamstow and Epping Forest Railway Bill was on Tuesday before Mr. Campion, one of the examiners of private Bills of the House of Commons, for the investigation of Standing Order proof. Opposition to the scheme was to have been offered by the Commons Preservation Society; but at the last moment it was arranged between the parties that the consideration of the prayer of the memorialists should be postponed until February 12.

SPECIAL CORRESPONDENCE:

COLONIAL AND FOREIGN.

MINING IN SPAIN (ASTURIAS).

(FROM OUR OWN CORRESPONDENT).

GIJON, 19TH JANUARY, 1894.

THE last year closed here with a steady aug. a n in the output of the collieries, with prices steady 23 pesetas per 1000 kilograms, for large screened and nuts for household purposes, 9½ pesetas for washed small, and 16 pesetas for furnace coke, free on board in Gijon. There are 101 patent fuel plants in the province. The largest of these make 500 tons per day. A large portion of this goes to supply loco motives with fuel all over Spain, and the remainder is shipped to Cadiz for consumption in the Transatlantic mail boats.

Another colliery is now ready to yield an output of 1000 tons per day.

As the Northern Railway is a single line throughout this province, the company is unable to cope with the continually increasing traffic, and through not having end tipping wagons adapted to the shipment of large quantities by means of the existing 30-ton crane mounted in Gijon, at the Fomento quay, there is continuous delay in shipping, and a consequent block, and the colliery owners are complaining about this grievance. In order to have more facilities for shipping, some of these have decided to divert their traffic to Aviles, a port 15 miles to the west of Gijon. But even with this, the difficulties will not be solved, as all has to be carried over the northern railway, and until this company alter their wagons, the necessary dispatch in loading will not be attained.

The owner of the colliery above referred to, as ready to produce 1000 tons per day, decided some time ago to construct, at his own expense, a narrow gauge line about 100 kilometres in length to the Concha de Artedo, another natural harbour, where he will, too, construct a mole, and place shipping plant. The survey was made last summer, and plans and estimates are now nearly ready, to apply to Government, for the concession. This will be secured at once, and its construction proceeded with.

The Felguera Iron and Steel works have orders booked well on into the year, and the Mieres Iron Works have also contracts secured for bridges and girder work that will keep them engaged for a good part of the year. Orders for bars, plates, hoops, &c., have to be booked three months in advance for delivery owing to the pressure of work. The Moreda Iron Works in Gijon have now completed a blast furnace which will be blown in about the middle of next month. This will yield about 400 tons of pig 'per week, to be used by them for foundry purposes, merchant iron and wire for their large wire nail department. They will draw the largest portion of the ore from mines in the district, and the remainder to fill their uses from Bilbao and Santander.

A company has been formed in Gijon with a large capital for a new industry. It has nothing to do with mining nor metallurgy, except in so far as that it will be a consumer of coal.

After repeated trials over some years it has been found that the land in many districts of the province is specially adapted for the growing of beetroot. This company after having made the necessary arrangement with the farmers, is now laying down a very extensive plant for sugar manufacturing, to be followed by a distillery. They have every kind of facility necessary to insure success.

There is a probability of work being started in the ancient mines in the Puerto de Aramo (referred to in the Journal of December 16 last) by English capitalists early next month. A long adit will be driven to tap the old workings in depth. There is a fine stream of water in the vicinity, flowing at 32 cubic feet per second, from which a fall of 30 metres can be secured equal to 350 h.p. nominal, sufficient for all purposes. The intention is to lay down a complete plant for classifying, &c., and for the separation of the metals by electrolysis. The quantity of attle from the ancient workings will yield a large quantity of copper and cobalt.

Samples picked from this have been assayed with the following results:—

Assayer:	Copper.	Cobalt.
Schanief Saxony ..	18.00 ..	7.80
" ..	57.00 ..	traces
Fabrique Maletra ..	16.30 ..	"
" ..	14.40 ..	"
" ..	15.50 ..	"
Whilst samples taken from the veins where the ancients left off working, gave:—		
Assayer.	Copper.	Cobalt.
Fabrique Maletra ..	71.40 ..	none
" ..	36.20 ..	"
" ..	32.70 ..	"
" ..	13.70 ..	1.66
" ..	9.20 ..	none
" ..	33.00 ..	"
" ..	27.00 ..	"
" ..	none ..	12.70
" ..	" ..	5.00
" ..	" ..	9.00
" ..	" ..	14.20
" ..	" ..	20.00
" ..	" ..	0.70

The ore is met with in irregular lodes, gradually widening as depth is attained. In the highest part of the mine where the ancients left off, the ore is from 1 to 8 inches wide. At 60 metres below this, it has widened out to over a metre. The lowest of the ancient workings have not yet been explored, as they are choked by attle, and it is not known to what depth they worked. The cutting of these in depth will solve the problem as to what may be expected in the Infesto copper district from the mines owned by the San Martin Syndicate.

INTERNATIONAL WORKMEN'S EXHIBITION.—A number of gentlemen whose names are subjoined have consented to act as an honorary committee for the purpose of affording information to British artisans respecting the objects of the International Workmen's Exhibition at Milan. This committee undertakes no financial responsibility:—Sir Julian Goldsmid, Bart, M.P.; Sir James Whitehead, George Jacob Holyoake, Co-operative Central Board, London; Count Henry Sergardi, Cav. L. Allatini, President Italian Chamber of Commerce; A. Serens, Esq., Vice-President Italian Chamber of Commerce, London, E.C.; P. Nicoli, Esq., Treasurer Italian Chamber of Commerce; J. C. Gray, Esq., General Secretary to the Co-operative Union, Manchester; B. T. Hall, Esq., Secretary of the Working Men's Club and Institute Union; Hodgson Pratt, Esq., Vice-President of the Labour Association; Aneurin Williams, Esq., Hon. Treasurer of the Labour Association; Henry Vivian, Esq., Secretary of the Labour Association.

OUR BOOK CASE.

THE CAMERA UNDERGROUND.

"*Mongrel Mines and Miners; or Underground Scenes by Flashlight.*" By J. C. Burrow, photographer to H.R.H. the Prince of Wales; and William Thomas, Assoc. M.Inst., C.E., F.G.S. (London: Simpkin, Marshall, Hamilton, Kent, and Co.)

This attractive and altogether novel work possesses a dual interest. It will come first as an enlightenment to those uninitiated people who have never been beneath the surface of the earth; while the photographer will see in it an abundance of evidence that his art is quite universal in its application. Mr. Common has shown us what the camera can do in the region of the heavens. Mr. J. C. Burrow gives us a striking example of its use in the bowels of the earth. His description, at the commencement of the volume, of the troubles he overcame in his underground photography, told in a light and easy style, will be very interesting reading to photographers, professional and amateur. Beyond this, however, the book is chiefly valuable for the vivid idea it conveys of underground life and of mining operations. Many a shareholder in the Cornish companies, to whom frequent references to the mines have in the past been almost unintelligible, will have a flood of light thrown upon his mind by this handsome and well-arranged volume. Such terms as "stopping," "engine shaft," "rock-drill," "gig," and "balance-box" stand out with an additional clearness after a glance between its attractive covers. Prefacing the volume is a plan of the wonderfully successful Dolcoath mine, with coloured markings of the various ore deposits and also a view of one of the principal mining districts in Cornwall. There is also added a clear description of the various mines in which the hand of Mr. William Thomas is easily discernable and for which the reader will be grateful to him.

ASSAYING.

"*A Manual of Practical Assaying.*" By H. Van F. Fumam, E.M. (London: Gay and Bird, 27, King William-street, Strand.)

Some three years ago the author of the present work published, in *The Mining Industry of Denver*, a series of articles entitled "Notes on Technical Chemical Analyses." These articles were favourably received by the technical public, and in compliance with numerous requests their republication in the present volume has been undertaken. Much new matter has, however, been added, embracing all the new technical methods which have been introduced since the publication of the first series of articles. Greatest prominence has been given to the rapid methods in vogue in the technical laboratories of the United States, supplemented by a detailed description of the longer and more exact ones. This work will be found useful and valuable to metallurgical chemists.

A WORK ON COPPER.

"*Le Cuivre.*" Paul Weiss, ingénieur au corps des Mines (*Encyclopédie de Chimie Industrielle et de Métallurgie*).

This is an interesting and useful work. After having visited the principal mines and copper works of Europe, the author has embodied his experiences in this volume. In the first part of the work he reviews the origin, beds, properties, and alloys of copper. In the second part, which treats of the metallurgy of the metal, he describes the roasting of the mineral, the manufacture of the bronze matte, the changing of the latter to black copper, the refining of the gross metal, and the treatment of it by the wet process. The third part of the book deals with the various applications to which copper can be applied—with the market, the manufacture and use of copper plates; its employment in electricity, &c. The work is profusely illustrated.

ANNALS OF BRITISH GEOLOGY.

"*Annals of British Geology, 1892.*" A Digest of the Book and Papers published during the Year. J. F. Blake, M.A., F.G.S. (London: Dulau and Co.)

This is a third volume, and in it changes of method have been introduced with the view, as the author says, of meeting the expressed wishes and suggestions of subscribers. The criticisms or observations on the papers are entirely separated from the extracts—the few notes that will be found amongst the latter being designed only to render the author's meaning clear, or to point out the bearing of the statements he makes by comparison with the statements of others on the same point. Another change is in the illustrations. These are now, as far as possible, of full size, or only slight reductions from the originals. All new British species except those in the Palaeontographical Society's volumes, are figured, and a selection of other illustrations which seem to be of special interest is made. In his preface the author remarks that "on the reception accorded to the present volume depends the continuance of its publication; the experimental stage is ended." He, therefore, invites the co-operation of all those who "desire a record of geological literature of any kind, for the Geological Record having fallen through, and the 'Year-Book of Science' being discontinued, if these annals cannot be put on a firm basis, the only remaining hope would be that the Geological Society should undertake a record at their own expense, by the aid of paid recorders."

PIGG'S PEAK ESTATE AND GOLD MINING COMPANY (LIMITED).

An extraordinary general meeting of the Pigg's Peak Estate and Gold Mining Company, was held on Thursday, at the Cannon-street Hotel, for the purpose of submitting for confirmation resolutions voluntarily winding up the company, passed at a recent meeting. Mr. George Rait, who presided, formally moved the resolutions without comment, which were seconded by Mr. Bulnois. In reply to questions, the Chairman referred to a letter appearing in *The Mining Journal*, in which reference was made to the probability of extensive discoveries of tin being made in Swaziland and expressed the hope that they would not only be found there, but also in the company's concession. They would take the earliest possible opportunity, provided the reconstruction was carried through, of employing the best available talent in prospecting the property, which up to the present had not been thoroughly nor even fairly well prospected. The concern was simply a mining venture, and it was impossible to say how much gold there was and its quality, although there could hardly be reasonable doubts of its existence. Probably the value of the ore would be about one ounce to the ton. Up to the present he did not think the mine had had a fair chance of paying. The money of the old company had to a large extent been wasted in laying down an unprofitable tramway, the rails of which were now out of position and consequently utterly useless. Then the three batteries had been put up in sites where it was difficult to drive them, and the directors would have to consider whether it would not be more economical to move one of the batteries up to Pigg's Peak and work it by electricity from the falls. One other thing he might mention was that whereas they had had a debenture debt which with interest approached to £250,000 the debenture holders were throwing their lot in with the ordinary shareholders. The amount of capital which would probably be available would be about £40,000. If a large number of the shares were not taken up the scheme of reconstruction would fall through. Three-quarters of the shares was the lowest number with which the reconstruction could proceed. The policy for the future undoubtedly was to husband the resources of the company, and to be content with prospecting. The motions were then put and carried unanimously.

OUR LATE COLUMN:

SPECIAL TELEGRAMS AND LATEST NEWS

Up to the time of going to Press.

LATEST MARKET REPORTS.

(SPECIAL TELEGRAMS FROM OUR OWN CORRESPONDENTS.)

MANCHESTER, Friday.

Strong market, and general upward tendency in pig iron, with fair weight of business doing. Local makers getting slightly better prices, and district and outside brands advanced fully 1s. to 1s. 6d. on the week. Hematites firmer. Finished iron without any quotable advance, but hardening. Coal quieter, with less firmness if anything, although it is very exceptional when Lancashire coal owners give way on list rates. Fuel is offering from other districts at lower prices.

BARNESLEY, Friday.

South Yorkshire coalowners are suffering great inconvenience and loss owing to scarcity of railway wagons, some collieries having to stop. Demand for best house coal is decidedly weaker, prices of Silkestone and Barnsley softs are from 6d. to 1s. per ton lower. Owing to block on lines London trade has suffered. Steam coal for shipping and locomotive purposes in fair request, best hard from 11s. to 12s. per ton at pits. Great Northern Railway Company still refuse to pay 9s. per ton, and are purchasing in open market. Slack and smudge bad to sell.

CARDIFF, Friday.

Last week shipments from Cardiff were the largest yet recorded, and increased activity has been noticeable in the steam coal trade. Prices for best qualities have slightly advanced, and other descriptions display a hardening tendency. In the house coal trade there has been an average demand for prompt shipment, but buyers are disinclined to look forward. Pit props, owing to a glut of timber continue cheap, and the demand for coke is easier, and the closing prices are as follows:—Best steam coal, 14s. to 14s. 6d.; best Monmouthshire, 13s.; dry coal, 12s. 3d. to 12s. 6d.; and small 6s. 6d. to 7s. 3d.; best bituminous coal, 15s. to 15s. 6d.; No. 3 large, 13s. 6d.; No. 2 large, 11s. 6d.; patent fuel, 13s.; foundry coke, 19s. to 20s.; furnace coke, 17s. to 18s.; and pitwood, 15s. per ton. There is a better enquiry for tin plate bar and steel rails, but prices are unaltered, while iron ore quotations have been well maintained.

CORNISH SHARE MARKETS.

REDRUTH, Friday

This evening's closing prices are as follows:—Carn Brea, 13½; Dolcoath, 7½; East Pool, 11½; Killifreth, 3½; South Crofty, 2½; Tincroft, 1½; West Kitt, 7½; West Frances, 1½; Wheal Agar, 3; Wheal Basset, 2½; and Wheal Grenville, 1½.

SOUTH AFRICAN GOLD MINING.

Another rich discovery.

JOHANNESBURG, Friday Afternoon.

The *Pall Mall* correspondent telegraphs that fine reefs have been discovered near Gwalo river, where the Salisbury and Victoria roads join.

800 claims have been pegged out.

The manager of the Willoughby Syndicate states that the quartz is the richest ever seen in Africa.

A COPY of the Bill which will be introduced next session "to authorise a company to make and maintain the East Glamorgan Railway" has been duly deposited in Parliament. It provides for the incorporation of a company with power to construct over 15½ miles of railways, the main line of which will be just over 10 miles in length, and will pass from a junction with the Barry Railway at Llantrisant, and terminate by a junction with the Rhymney Railway at Gelligaer. The remaining railways which will comprise this new system are intended to connect the proposed main line with the Brecon and Merthyr Tydfil Junction Railway at Bedwellty in Monmouthshire with the Joint Railway of the Great Western and Rhymney Valley Companies, known as the Taff Bargoed Railway. The capital of the new company is proposed to be fixed at £450,000, divided into 45,000 £10 shares. The borrowing powers under the Bill are limited to £150,000, thus making a total share and loan capital of £600,000. As regards this capital an important provision is inserted, which, if sanctioned, will authorise the Barry Railway Company to subscribe £150,000 of the total sum required and to guarantee interest on any of the remaining share and loan capital of the company. For this purpose the Bill proposes to empower the Barry Company to raise £150,000 additional capital, and also makes provision for the election to the board of directors of three representatives of the Barry Company. The time sought for the completion of this railway is five years from the passing of the Act, and during this period power is sought to pay interest out of capital, provided that the aggregate sum so paid shall not exceed £30,000. The Bill also contains clauses to empower the new company to run over the Rhymney Railway, the Taff Bargoed Railway and the Brecon and Merthyr Tydfil Junction Railway, for distances northward of the points where the proposed railway will form junctions with these railways. Power is also proposed to be taken to enter into working agreements with the Barry, the Midland, the Rhymney, the Great Western and Brecon and Merthyr Tydfil Junction Railway Companies.

THE Mayor of Crewe recently wrote to the London and North Western Railway Company asking if there was any ground for the belief entertained locally that the company were not anxious to develop other industries in Crewe besides their own railway works. The secretary of the company writes that he has laid the Mayor's letter before the directors, and that his worship was right in his assumption that they had no desire to discourage the introduction of any industry into Crewe. On the contrary, the company were very wishful to see the industries extended, and as evidence of that fact he mentioned that, at the request of the directors, the company's clothing contractors recently transferred a portion of their business to Crewe. The secretary mentions, further, that the railway company intend to spend a large sum of money in improving the railway facilities at Crewe. It is stated that the London and North Western Company contemplate spending over £100,000 in alterations and extensions of Crewe Station. Plans have been deposited with the local authorities.

AN official intimation has been given that the promoters of the proposed Carmarthen, Pendine, and South Milford Haven Railway do not intend to proceed with this scheme in the coming session of Parliament. The main object of the scheme was to construct a railway from the Central Wales and Carmarthen Junction Railway of the London and North Western Railway Company to a junction with the Pembroke and Tenby Railway.

BOOKS RECEIVED.

"*Miners Wages and the Sliding Scale.*" By William Smart, M.A., LL.D., Lecturer on Political Economy in the University of Glasgow. Glasgow: James Maclehoose and Sons; London: Simpkin, Hamilton, and Co. Price 6d.

"*The English Illustrated Magazine.*" Price 6d.

"*How to Correct Printers' Proofs.*" By the late William Blades. London: Blades, East, and Blades, 23, Abchurch-lane, E.C. Price 6d.

THE METAL MARKETS.

LONDON METAL MARKET.

THE METAL MARKET—LONDON, JANUARY 26.

Copper.

THE market for G.M.B.'s opened fairly steady at £42 3s. 9d. three months, but declined to £42 2s. 6d., and for s.c. to £41 15s. The drop in silver no doubt had some effect, and in the evening the cash price was as low as £41 10s. On Tuesday £42 and £41 17s. 6d. were accepted for three months, whilst Wednesday witnessed a further depreciation of values (in consequence of realisations) to £41 6s. 3d. s.c. and £41 15s. three months. Yesterday we had a somewhat better tone, and values closed about 2s. 6d. better. To-day's market opened stronger, but after £42 1s. 3d. three months had been done, it eased off again and closed at £41 8s. 9d. to £41 10s. s.c. and £41 17s. 6d. to £41 18s. 9d. three months. The position, therefore, is that although we close above the worst the value is lower for the week. Consumers in Europe can evidently still hold out for several weeks before being compelled to lay in fresh supplies. The demand for refined and manufactured copper is quiet and prices are easier. Fine copper continues dull and in poor demand. In furnace material small parcels of Californian and Chili ore have changed hands at 7s. 9d. and 7s. 10½d. respectively.

Tin

opened flat and values showed a relapse of about 15s. upon the previous Friday's close, three months being sold at £72 and s.c. at £71 5s. Later in the day the latter position was done at £71. The main cause of this decline was the heavy fall in silver, viz., from 31½d. to 30½d. Tuesday opened better with a reaction to £71 10s. s.c. and £72 5s. three months, but the subsequent values were only a shade above the lowest until Thursday, when the tone improved slightly and transactions were recorded at £71 10s. s.c. and £72 10s. three months. To-day up to £71 15s. s.c. was paid, but this was followed by a relapse to £71 10s., and we close quiet but steady at £71 7s. 6d. to £71 10s. s.c. and £72 5s. to £72 7s. 6d. three months. In the Dutch market billiton opened at 44 fl. s.c., and fell ½ fl., but recovered ¼ fl., closing at 43½ fl.

Pig Iron.

An improvement is reported in manufactured iron, and the Scotch pig iron market has reflected the better tendency. Values have risen for s.c. Scotch in the Glasgow market from 43s. 2d. to 44s. 0½d., but have suffered a reverse this afternoon the market closing at 43s. 8½d. s.c., with hematites at 45s. 8d., and Cleveland at 35s. 11½d. The shipments from Scotland last week are as 3430 tons or 836 tons over those of the same period of last year.

Lead

remains a quiet market, but there is more steadiness in the tone, and the closing value is £9 6s. 3d. to £9 7s. 6d. soft foreign and £9 8s. 9d. to £9 10s. English.

Spelter.

There has been a slight improvement in this article, and English consumers have bought a little. The orders seem, however, to be now filled, whilst supplies are superabundant, partly because consumption on the continent has fallen off and partly because so many new works have been started, several of them being already in active operation. Not only have these works considerably increased—and will still further increase—the output of spelter, but they are expected, at least in one or two cases, to materially reduce the present cost of production. The market closes at £16 5s. to £16 7s. 6d. ordinaries and £16 7s. 6d. specials.

Antimony

quiet at £37—i.e., last week's price.

Quicksilver

is again easier at £5 17s. 6d. firsts and £5 16s. seconds.

The following are to-night's (January 26) prices of metals:—

	Copper.	£ s. d.	£ s. d.
Tough cake and ingot	...	43 15 0	44 15 0
Best selected	...	44 15 0	45 10 0
Sheets and sheathing	...	52 10 0	53 10 0
Flat bottoms	...	53 10 0	54 10 0
Chili bars	...	41 10 0	41 10 0
Good merchantable, spot, & 3 months respectively	...	41 10 0	41 10 0
Copper tubes	...	0 0 7½	0 0 7½
Alloys.
BRASS: Wire	...	0 0 5½	0 0 5½
" Tubes (solid drawn)	...	0 0 5½	0 0 5½
" Sheets	...	0 0 5½	0 0 5½
PHOSPHOR BRONZE: Alloys II.	...	83 0 0	83 0 0
" III. or V.	...	83 0 0	83 0 0
" VII.	...	83 0 0	83 0 0
" VIII.	...	83 0 0	83 0 0
" Vulcan brand Al B.C.	...	80 0 0	80 0 0
DURO METAL	...	80 0 0	80 0 0
BULL'S METAL	...	70 0 0	70 0 0
FERROBRONZE: Ingots	...	0 0 8	0 0 8
" Ordinary sheets, plates, bolts and bars	...	0 0 7½	0 0 7½
" Screw bolts and nuts	...	0 0 8½	0 0 8½
" Pump rods, plain	...	0 0 7½	0 0 7½
" " finished	...	0 0 10½	0 0 10½
DELTA METAL: No. 4 (per ton)	...	73 10 0	73 10 0
" Sheets and plates (per lb.)	...	0 0 10½	0 0 10½
" Bars, round, square, flat (per lb.)	...	0 0 9½	0 0 9½
" " hexagon (per lb.)	...	0 0 9	0 0 9
Tin.
English, ingots, f.o.b.	...	75 10 0	76 0 0
" bars	...	75 10 0	77 0 0
" refined	...	77 10 0	78 0 0
Strait, spot and 3 months respectively	...	71 10 0	72 7 6
Australian spot, and three months respectively	...	71 17 6	72 15 0
Banco (in Holland)	...	76 12 6	76 12 6
TRIPLES: Charcoal, best quality	...	0 16 0	0 16 0
" ordinary	...	0 12 6	0 14 6
" Coke, best quality	...	0 11 3	0 11 6
" ordinary	...	0 10 9	0 11 0

These prices of tinplates are f.o.b. at Swansea; at Liverpool 6d. per box more.

	Iron.	£ s. d.	£ s. d.
Pig, G.M.B., f.o.b. Clyde, spot	...	2 11 6	2 11 6
" Scotch pig, No. 1 Gartsherrie	...	2 16 6	2 16 6
" Coltness	...	2 16 6	2 16 6
" Clyde	...	2 9 6	2 9 6
" Govan	...	2 4 6	2 4 6
Bars, Welsh, f.o.b. Wales	...	5 2 6	5 2 6
Plates	...	5 2 6	5 2 6
Bars, Staffordshire, at works	...	5 12 6	5 12 6
Sheets	...	6 17 6	6 17 6
Plates	...	5 15 0	5 15 0
Hoops	...	4 12 6	4 12 6
Ship plates, Middlesbrough	...	4 12 6	4 12 6
STEEL: English spring	...	9 0 0	23 0 0
" cast	...	16 0 0	55 0 0
" Rails at works, 50 lbs. per yard and upwards	...	3 15 0	3 18 6
" light, at works, according to section (extra)	...	0 10 0	2 0 0
Spanish or soft foreign	...	9 6 3	9 7 6
English pig, common	...	9 6 3	10 5 0
" L.B.	...	10 15 0	10 15 0
" sheet and bar	...	11 5 0	11 5 0
" pipe	...	13 0 0	13 0 0
" red	...	17 10 0	17 10 0
" white	...	14 10 0	14 10 0
" patent shot	...	14 10 0	14 10 0

Spelter

	Antimony.	£ s. d.	£ s. d.
Silesian ordinary brands	...	16 5 0	16 5 0
" special brands	...	16 7 6	16 7 6
English Swansea	...	16 17 6	16 17 6
Sheet Zinc	...	18 15 0	19 0 0
Antimony	...	37 0 0	37 0 0
Quicksilver.	...	5 17 6	5 17 6
Flasks, 75 lbs. warrants	...	0 11 6	0 11 6
Ore, c.i.f., U.K. ports	...	0 10 11	0 10 11
1st quality, 50 per cent. and upwards	...	0 10 11	0 10 11
2nd " 47 per cent. to 50 per cent.	...	0 8 8	0 8 8
3rd " 40 " 47 per cent.	...	0 8 8	0 8 8
Aluminium.	...	Per lb.	Per lb.
99-99½ per cent. (guaranteed 98 per cent. min.) in ingots (1 cwt. lots)	...	0 2 0	0 2 0
" (3 cwt. and up)	...	0 2 0	0 2 0

ABBREVIATIONS AND REFERENCES.—The following are the significations of the abbreviations and references which occur in the Share List:—*L*, Lead; *M*, Muriate; *N*, Nitrates; *P*, Phosphates; *Q*, Quicksilver; *R*, Ruby; *S*, Silver; *Ss*, Silver-lead; *Sul*, Sulphur; *T*, Tin; and *Z*, Zinc. * In the "called up" column of British Mines, signifies that the mine is conducted on subject to the Limited Liability Law of the South African Republic. • The following is by far the most complete and comprehensive list of mines, in whose shares business is being currently transacted, published. Additions will be made from time to time as occasion requires. Every effort is made to ensure that the list is almost invariably be found correct; we do not hold ourselves responsible for any loss or inconvenience that may arise from possible inaccuracies. * In the "called up" column of British Mines, signifies that the mine is conducted on subject to the Limited Liability Law of the South African Republic. • The following is by far the most complete and comprehensive list of mines, in whose shares business is being currently transacted, published. Additions will be made from time to time as occasion requires. Every effort is made to ensure that the list is almost invariably be found correct; we do not hold ourselves responsible for any loss or inconvenience that may arise from possible inaccuracies.

NORTH AMERICAN MINES.									
Name.	Closing Price, Jan. 26, 1894	Closing Price, Jan. 19, 1894	Par.	Latest Dividend.	Called up per Share.	Shares Issued.	Situation of Mine.	Head Office.	
Almaden and T...	7/3	9/9	—	—	—	—	—	—	
Amador	—	—	—	—	—	—	—	—	
American Bell	1/9	2/3	1 0	—	—	—	—	—	
Arizona	7/6	8/-	1 0	—	—	—	—	—	
Canadian Phos.	—	—	—	—	—	—	—	—	
Colorado Silver	—	—	—	—	—	—	—	—	
De Lamar	23/-	24/-	24/6	—	—	—	—	—	
Dickens Custer	—	—	—	—	—	—	—	—	
Elkhorn	8/6	10/6	10/6	—	—	—	—	—	
Emma	—	—	—	—	—	—	—	—	
Flagstaff	—	—	—	—	—	—	—	—	
Garfield	—	—	—	—	—	—	—	—	
Golden Feather	—	—	—	—	—	—	—	—	
Golden Gate	—	—	—	—	—	—	—	—	
Golden Lead	—	—	—	—	—	—	—	—	
Golden Valley	—	—	—	—	—	—	—	—	
Harquahua	—	—	—	—	—	—	—	—	
Harcob Valley	—	—	—	—	—	—	—	—	
Idaho	—	—	—	—	—	—	—	—	
Idaho	—	—	—	—	—	—	—	—	
Idaho	—	—	—	—	—	—	—	—	
Idaho	—	—	—	—	—	—	—	—	
Idaho	—	—	—	—	—	—	—	—	
Idaho	—	—	—	—	—	—	—	—	
Idaho	—	—	—	—	—	—	—	—	
Idaho	—	—	—	—	—	—	—	—	
Idaho	—	—	—	—	—	—	—	—	
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AUSTRALIAN AND NEW ZEALAND MINES.									
Achilles Gold Fls				1 0		1 0 0	80,367	New Zealand	3, Church Pse. E.C.
Andliff Lamp	G	1 1/2	1 1/2	—	—	1 0 0	100,000	N. Wales	4-6, Throg. Avenue.
Anglo-Saxon	G	—	—	—	—	1 0 0	51,000	Queensland	4, Lombard-court.
Australasian	G	1/6	2/-	2/-	1 0	1 0 0	210,000	Queensland	6, Queen-st. place
Australian	G	—	—	—	—	1 0 0	18,315	N. Australia	15, Old Jewry Chhrs
Aus. Ro. Hill Con.	G	1/9	2/3	2/3	1 0	1 0 0	540,000	N. S. Wales	Winchester House.
Blue Spru & G. G.	G	—	—	—	—	1 0 0	120,000	Queensland	6, St. St. Helen's
Bonnie Dundee G.	G	2/9	3/-	3/-	1 0	1 0 0	170,000	Queensland	3-5, Gracechurch-st.
Brilliant Black.	G	1 1/2	1 1/2	—	—	1 0 0	180,000	N. S. Wales	3, Gracechurch-st.
Brit. Brok. Hill S.	G	3/-	4/-	4/6	5 0	0 8 0	966,000	N. S. Wales	Abchurch Chambers
Broken Hill Prop.	G	2 1/2	2 1/2	2 1/2	1 0	0 12 6	100,000	N. S. Wales	Abchurch Chambers
Carrington	G	—	—	—	—	0 5 0	95,000	India	9, Tokenhouse Yard
Coromandel	G	—	—	—	—	0 4 6	100,000	Queensland	6-7, Queen-street-pl.
Craven's Cal.	G	4/-	5/-	5/-	6 0	0 19 0	200,000	Queensland	30 1, 3, Smith In'ls.
Cumblin (New) G.	G	4/-	2/-	2/-	1 0	1 0 0	494,400	Queensland	Rimfield House.
Day Dawn B. & W. G.	G	4/-	5/-	4/9	1 0	0 18 3	120,000	Queensland	3-5, Gracechurch-st.
Day Dawn F. C. G.	G	5/6	6/3	6/3	1 0	0 5 0	324,280	Queensland	Winchester Ho. E.C.
Etheridge	G	1/-	1/5	1/9	1 0	0 10 0	150,000	Queensland	31, Lombard-street.
Golden Gate	G	—	—	—	—	1 0 0	146,330	Queensland	6-7, Queen-street-pl.
Harrietteville	G	—	—	—	—	0 18 6	88,275	Queensland	9, Tokenhouse Yard
Kaboonga	G	—	—	—	—	0 18 9	250,000	Queensland	6-7, Queen-street-pl.
Kangarilla	G	-/9	1/-	1/-	1 0	1 0 0	180,000	N. S. Wales	30, St. Swithin's-st.
Kapanga	G	-/9	1/3	1/9	1 0	0 15 9	39,000	Queensland	3, Gracechurch-st.
Kapanga	G	-/9	1/3	1/9	1 0	0 15 9	39,000	Queensland	16, St. Helen's-place.
Midas G. F.	G	-/6	-/9	-/9	1 0	0 6 3	28,000	Queensland	3-5, Gracechurch-st.
Midas F. Day Dawn	G	—	—	—	—	0 2 0	180,000	Queensland	7, Draper's-wards.
Mosman	G	1 1/2	1 1/2	1 1/2	1 0	0 15 0	275,000	Queensland	Leadenhall Bldgs.
Mosman	G	1 1/2	1 1/2	1 1/2	1 0	0 15 0	275,000	Queensland	4, Tokenhouse Bldgs.
Mt. Levan	G	4/-	4/6	4/6	1 0	0 19 6	158,915	Tasmania	43, Bealings-hill E.C.
Mt. Levan	G	1/6	1/6	1/6	1 0	0 19 6	158,915	Tasmania	43, Bealings-hill E.C.
Mt. Morgan Id. G.	G	1/8	2/6	2/6	10 0	0 10 0	43,353	Queensland	30, St. Swithin's-st.
Mt. Morgan Id. G.	G	1/8	2/6	2/6	10 0	0 10 0	43,353	Queensland	30, St. Swithin's-st.
Mt. Shamrock	G	1 1/2	2 1/2	2 1/2	5/-	0 10 0	75,180	Queensland	57, Moorgate-st., E.C.
Mount Zeehan	G	—	—	—	—	0 5 0	270,000	Queensland	7-8, St. Winchester St.
New Queen	G	8/-	9/-	9/-	1 0	0 5 0	270,000	Queensland	80, Coleman-st., E.C.
Port Phillip	G	—	—	—	—	1 0 0	150,000	New Zealand	32, Gresham-st., E.O.
Port Phillip	G	—	—	—	—	1 0 0	500,000	N. S. Wales	11, Abchurch In E.O.
Tasmanian Bldy Un	G	—	—	—	—	—	—	—	—
Tasmanian Silver	G	—	—	—	—	—	—	—	—
Victory	G	—	—	—	—	—	—	—	—
Walsh	G	—	—	—	—	—	—	—	—
Wentworth Ord. G.	G	1 1/2	2 1/2	2 1/2	1 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0	—	—	—	—
Wentworth Ord. G.	G	3/6	4/6	5/-	4 0				

INDIAN AND ASIATIC MINES.									
Palaghat Mysore G	5/6	6/8	8/6	1 0	—	1 0 0	180,000	India	6-7, Queen-street-pl.
Burma Ruby.....H	2/9	3/3	3/3	1 0	—	0 17 0	300,000	Burmah	Suffolk House, E.C.
Champion Reef.....G	3 3/4	3 1/4	3 1/4	1 0	—	1 0 0	200,000	India	6-7, Queen-street-pl.
Color Central	-/8	-/9	-/9	1 0	—	1 0 0	200,000	India	Dashwood Ho., E.C.
Coromandel.....G	—	—	—	1 0	—	0 12 6	120,000	India	6-7, Queen-st. place.
Devila Moyer.....G	—	—	—	1 0	—	1 0 0	200,000	India	34, Nicholas-lane.
Gemring & Mining	—	—	—	2 0	—	1 7 6	24,456	Ceylon	183, Gresham House
Gold Fids Mysore G	20/-	20/6	21/-	1 0	1/- July '92	1 0 0	220,000	India	6-7, Queen-street pl.
Gold Fids Siam G	—	—	—	1 0	—	1 0 0	—	Siam	19, St. Swithin's-lane.
Hyderabad Dec.....	—	—	—	10 0	—	10 0 0	1,000,000	Deccan	16, Rt. Helen's-place.
Kempinkote Gold	—	—	—	5 0	—	0 3 0	998,950	India	6-7, Queen-st. place.
Mysore	3 7/8	3 3/4	3 3/4	1 0	3/6 Oct, '93	1 0 0	225,000	India	6-7, Queen-st. place.
Mysore Reefs	7/8	8/8	7/8	1 0	—	0 19 6	130,000	India	6-7, Queen-street pl.
Mysore West	5/6	5/6	5/6	1 0	—	1 0 0	230,000	India	Dashwood Ho., E.C.
Nine Feet	2/3	2/9	1/6	1 0	—	0 10 0	250,000	India	Freshwood Ho., E.C.
Nundydroog.....G	1/9	1/3	1/6	1 0	1/6 Aug. '93	1 0 0	200,000	India	6-7, Queen-street-pl.
Ooregum (Df. O. C)	3 1/4	3 1/4	3 1/4	1 0	3/6 Dec. '93	1 0 0	145,000	India	6-7, Queen-street-pl.
Do. (10 1/2 Corr.)	4 3/4	4 1/4	4 1/4	1 0	3/6 Dec. '93	1 0 0	120,000	India	6-7, Queen-street-pl.
Pahang Conf.....	5	5 1/4	5 1/4	1 0	—	1 0 0	200,000	Malay Penin.	Blomfield, Ho. E.C.
Pahang Kahang.....	3/-	5/6	5/6	1 0	—	1 0 0	200,000	Malay Penin.	Blomfield, Ho. E.C.
South F. Mysore G	4/3	4/3	4/3	1 0	—	1 0 0	200,000	Malay Penin.	Blomfield, Ho. E.C.

EUROPEAN MINES.											
Alamillos	L	10/-	15/-	15/-	1 0	1/8 Mar. '92	1 0 0	80,5 7	Spain	5, Queen-street-plac	Con. B.
Argentina	C				1 0	—	1 0 0	133,165	Corcia	16, Philipot-lane.	Con. D.
Bratsberg	C	¾		¾	1 0	—	0 18 0	120,200	Norway	1, Graham-buildings	De Br.
English Cr. Spelter		¾	¾	¾	1 0	5% Dec. '92	1 0 0	84,000	Lombardy	9, Queen-street-place	Do. 5% Durban
Fortuna	L	¾	¾	17/6	2 0	1/3 Mar. '92	2 0 0	25,000	Spain	6, Queen-street-place	Edwin Forsyth
Libiola	C	38½	37½	38½	5 0	2/6 Sept. '93	5 0 0	57,400	Italy	Dashwood H., E.C.	Goldenh.
Linara	L	3½	3¾	3½	5 0	5/- Sep. '93	3 0 0	15,000	Spain	6, Queen-street-place	Golden
Marbella	L	54/-	54/-	54/-	10 0	8½ Aug. '91	10 0 0	25,000	Spain	78, Queen Victoria-st.	George A.
Mason & Barry	C	47/6	47/6	47/6	10 0	2/- Oct. '91	5 0 0	117,240	Norway	5A, Austin Priars.	George G.
Pacer	C				5 0	—	3 0 0	67,129	Italy	8-7, Queen-street-plac	Gold Field
Potenza	C	1/8	2/-	2/-	20 0	12½ Dec. '92	20 0 0	325,000	France	30, St. Swithin's-lane	Graham
Ro Tinto	L	10	12	14½	20 0	7/- Nov. '95	100 0	1,400	Spain	30, St. Swithin's-lane	Graskop
Ro. (Mort. Bonds)		1½	105	103	100 0	5/- Jan. '91	100 0	2,158,960	Spain	30, St. Swithin's-lane	Great Brit.
Ro. (2nd do. Bonds)		100½	101½	101½	100 0	5/- Jan. '91	100 0	1,127,180	Serbia	Liverpool.	Goldman
Spain	AG	5/-	7/-	7/-	1 0	—	0 18 0	85,000	Spain	Glasgow	Henr W.
Spain	C	4½	8	8	1 0	15% Apr. '93	10 0 0	10,080	Germany	Walbrook Ho. E.C	Heriot
Prussian Pre		10	10½	10½	10 0	8½ Jan. '93	10 0 0				
Prussian Or.		18	18	18	10 0	8½ Jan. '93	10 0 0				

AFRICAN MINES.									
Africander.....	G	1 1/2	1 1/2	1 1/2	1 0	1 0 0	40,000	Transvaal	9, St. Swithin's lane
Agnes Block.....	G	3/4	3/4	1 1/2	1 0	1 0 0	78,507	Waterford.....	54, Old Br-ad-street
Aurora.....	G	1/4	1/4	1 1/2	1 0	1 0 0	50,000	Waterford.....	Johannesburg.
Aurora West, New	G	1/4	1/4	1 1/2	1 0	1 0 0	85,000	Waterford.....	1, Crosby Square,
Aurum.....	G	1/4	1/4	1 1/2	1 0	1 0 0	75,000	Waterford.....	32, Holborn Viaduct.
Balkis Consol., ..G					1 0			Transvaal	9, Gracechurch-st.
Banket.....	G	-9/	1/3	1 1/2	1 0	1 0 0	600,000	Waterford.....	Johannesburg.
Bantjes Reef.....	G	8/-	9/-	1 1/2	1 0	1 0 0	200,000	Waterford.....	Warnford-court.†
Barrett, (New).....	G			1 1/2	1 0	1 0 0	95,000	Waterford.....	17, Basinghall-street
Batley Reef.....	G			1 1/2	1 0	1 0 0	235,358	Waterford.....	42, Old Jewry, E.C.
Bechuanaand Exp.	G	14/8	15/6	16/-	1 0	1 0 0	120,000	Waterford.....	19, St. Swithin's-lane
Blauwbank Un. G				1 0	1 0	1 0 0	200,000	Waterford.....	Johannesburg.
Cape Copper.....	G	1 1/2	1 1/2	1 1/2	2 0	2 0 0	345,000	Waterford.....	9, Queen-street-plot.
Con. Montrose.....	G			1 1/2	1 0	1 0 0	149,000	Waterford.....	10, Thringmont Av.
Champ d'Or.....	G			1 1/2	1 0	1 0 0	115,016	Waterford.....	8, Old Jewry, E.C.
Cliff and Suburb. G		11 1/2	11 1/2	11 1/2	1 0	1 0 0	75,000	Waterford.....	1, Crosby Square.
Coetzestein.....	G	2/-	2/-	2/6	1 0	1 0 0	75,000	Waterford.....	105, Leadenhall-st.
Con. Ruitfontein D	G	25/-	26/-	26/-	5 0	5 0	170,000	Waterford.....	62, Lombard-st.
Con. Deon Levels G		13 1/2	13 1/2	13 1/2	1 0	1 0 0	721,500	Waterford.....	30, St. Swithin's-lane
Cross (New).....	G	1 1/2	1 1/2	1 1/2	1 0	1 0 0	187,250	Waterford.....	66, Gresham-st.
Crown Reef.....	G	9 1/2	9 1/2	9 1/2	1 0	1 0 0	35,000	Waterford.....	23, Austin Friars.]
De Beers Consol. D		15 1/2	15 1/2	16	5 0	5 0 0	3,950,000	Waterford.....	62, Lombard-street.
Do. 5 1/2 % 1st Deb.,		105	106	108				Waterford.....	
Do. 5 1/2 % 2nd Deb.,		104 1/2	105 1/2	105 1/2				Waterford.....	
Durban Roadst. G		5 1/2	5 1/2	10 1/2	1 0	1 0 0	125,000	Waterford.....	28, Leadenhall-bldg
Edwin Bray.....	G			1 1/2	1 0	1 0 0	65,000	Waterford.....	23, College-Hill.
Eisen.....	G			1 1/2	1 0	1 0 0	65,000	Waterford.....	29, Old Jewry, E.C.
Eisenberg.....	G	7 1/2	8 1/2	8 1/2	1 0	1 0 0	450,000	Waterford.....	29, Holborn Viaduct.
Eisenberg Reef.....	G	7 1/2	8 1/2	8 1/2	1 0	1 0 0	450,000	Waterford.....	45-6, Leadenhall-st.
Eisenhuys Deep G		2 1/2	2 1/2	2 1/2	1 0	1 0 0	265,000	Waterford.....	30, St. Swithin's-lane
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	29 & 30, Hol. Viaduct.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Warnford Court, E.O
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Johannesburg.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	2, Dracena-garden.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Queen-Victoria.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Old Jewry, E.C.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	14, Thringmont-av.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	4, Bishopgate-st. W.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Warnford Court, E.O
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Johannesburg.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	2, Dracena-garden.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Queen-Victoria.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Old Jewry, E.C.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	14, Thringmont-av.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	4, Bishopgate-st. W.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Warnford Court, E.O
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Johannesburg.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	2, Dracena-garden.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Queen-Victoria.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Old Jewry, E.C.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	14, Thringmont-av.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	4, Bishopgate-st. W.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Warnford Court, E.O
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Johannesburg.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	2, Dracena-garden.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Queen-Victoria.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Old Jewry, E.C.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	14, Thringmont-av.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	4, Bishopgate-st. W.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Warnford Court, E.O
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Johannesburg.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	2, Dracena-garden.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Queen-Victoria.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Old Jewry, E.C.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	14, Thringmont-av.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	4, Bishopgate-st. W.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Warnford Court, E.O
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Johannesburg.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	2, Dracena-garden.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Queen-Victoria.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Old Jewry, E.C.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	14, Thringmont-av.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	4, Bishopgate-st. W.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Warnford Court, E.O
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Johannesburg.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	2, Dracena-garden.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Queen-Victoria.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Old Jewry, E.C.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	14, Thringmont-av.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	4, Bishopgate-st. W.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Warnford Court, E.O
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Johannesburg.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	2, Dracena-garden.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Queen-Victoria.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Old Jewry, E.C.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	14, Thringmont-av.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	4, Bishopgate-st. W.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Warnford Court, E.O
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Johannesburg.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	2, Dracena-garden.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Queen-Victoria.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Old Jewry, E.C.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	14, Thringmont-av.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	4, Bishopgate-st. W.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Warnford Court, E.O
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Johannesburg.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	2, Dracena-garden.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Queen-Victoria.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Old Jewry, E.C.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	14, Thringmont-av.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	4, Bishopgate-st. W.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Warnford Court, E.O
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Johannesburg.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	2, Dracena-garden.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Queen-Victoria.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Old Jewry, E.C.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	14, Thringmont-av.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	4, Bishopgate-st. W.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Warnford Court, E.O
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Johannesburg.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	2, Dracena-garden.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Queen-Victoria.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Old Jewry, E.C.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	14, Thringmont-av.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	4, Bishopgate-st. W.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Warnford Court, E.O
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Johannesburg.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	2, Dracena-garden.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Queen-Victoria.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Old Jewry, E.C.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	14, Thringmont-av.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	4, Bishopgate-st. W.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Warnford Court, E.O
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	Johannesburg.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	2, Dracena-garden.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Queen-Victoria.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1 0 0	120,000	Waterford.....	8, Old Jewry, E.C.
Eisenhuys Est. G		7 1/2	8 1/2	8 1/2	1 0	1			

"THE MINING JOURNAL" SHARE LIST (African Mines continued).

Name.	Closing Price, Jan. 26, 1894.	Closing Price, Jan. 19, 1894.	Par.	Latest Dividend.	Called up Per Share.	Shares Issued.	Situation of Mine.	Head Office.	Name.	Closing Price, Jan. 26, 1894.	Closing Price, Jan. 19, 1894.	Par.	Latest Dividend.	Called up Per Share.	Shares Issued.	Situation of Mine.	Head Office.
Joe's Luck.....G	3/6 4/6	5/6	1 0	30% Oct. '93	0 16 0	57,404	De Kaap	11, Queen Vic.-st.	Piggs PeakG	-3 -9	-9	1 0	—	2 0 0	230,328	Swaziland	6, Queen-street-place,
Jubilee.....G	6 1/2 6 1/2	7 1/2	1 0	10% Jan. '95	1 0 0	20,000	Witwatersdrd.	8, Old Jewry-I	Potchefstroom ..G	—	—	1 0	—	1 0 0	181,000	Potchefstroom	18, Bury-st., E.O.
Jumpers.....G	3 1/4 3 1/4	3 1/2	1 0	—	1 0 0	100,000	Witwatersdrd.	29, Holborn-Viaduct-I	Princess Estate ..G	—	—	1 0	—	1 0 0	72,046	Witwatersdrd.	33, Cornhill, E.O.
Kleinfontein ..G	5/6 6/-	6/6	1 0	—	1 0 0	150,000	Witwatersdrd.	8, Old Jewry	Randfontein.....G	10/- 11/-	11/-	1 0	—	1 0 0	1,016,500	Witwatersdrd.	59, Holborn-Viaduct-I
Klondike.....G	3 3/4	18/-	1 0	—	1 0 0	150,000	Transvaal	110, Cannon-street.	Read's Drift.....D	4/8 5/8	5/8	1 0	—	5 0 0	5,000	Transvaal	19, Finsbury-circus.
Knight.....G	3 3/4 4 1/4	4 1/2	3 0	20% July, '92	1 0 0	447,000	Witwatersdrd.	19, Bury-street, E.O.	Robinson.....G	4 1/2 4 1/2	4 1/2	1 0	4% June '93	5 0 0	543,750	Transvaal	55, Holborn-Viaduct-II
Langlaagte Est..G	1/9 2/3	2/3	2 6	—	1 0 0	427,950	Witwatersdrd.	59, Holborn-Viaduct-I	Roopepoort Un..G	—	—	1 0	—	1 0 0	465,000	Witwatersdrd.	Warnford-court-I
Libon-Berlyn ..G	6/9 7/3	3/6	1 0	6% Mar. '90	1 0 0	344,503	Witwatersdrd.	110, Cannon-street.	St. Augustine.....D	2 1/2 2 1/2	2 1/2	1 0	—	1 0 0	93,000	Witwatersdrd.	1, Crosby-square-Ia
Lydenburg.....G	—	—	—	—	—	—	Witwatersdrd.	8, Old Jewry	Salsbury New.....G	15/6 16/6	16/-	1 0	-5 Aug. '93	1 0 0	814,450	Witwatersdrd.	18, St. Helen's-place.
Main Reef.....G	4/9 5/3	5/-	1 0	—	1 0 0	300,000	Witwatersdrd.	Warnford-court-I	Shelsley.....G	-3 -6	-6	1 0	—	1 0 0	20,000	Witwatersdrd.	4, Sun Court, E.O.
Manica Ophir.....G	9/9 10/3	11/-	1 0	—	1 0 0	96,000	Witwatersdrd.	2, Pinner's Court.	Simmer & Jack...G	3 1/2 4	4	1 0	10% Nov. '93	1 0 0	85,000	Witwatersdrd.	8, Old Jewry
May Deep Level ..G	11 1/2 13 1/2	16/3	1 0	—	1 0 0	430,000	Witwatersdrd.	4, Lothbury-I	S.A. Gold Trust ..G	12/- 13/-	13/-	1 0	100% Mar. '90	1 0 0	20,000	Witwatersdrd.	15, Bishopsgt-st. Wt.
Metropolitan.....G	5 1/2 5 1/2	5 1/2	1 0	35% July '93	1 0 0	171,687	Witwatersdrd.	31, Cornhill, E.O.	Spitzkop.....G	1 1/3 1 1/3	1 1/3	1 0	50% May. '93	1 0 0	144,531	Witwatersdrd.	1, Crosby-square-I
Meyer & Ophir.....G	6/3 6/9	6/8	1 0	—	1 0 0	45,000	Witwatersdrd.	1, Crosby Square I	Stanhope.....G	1 1/2 1 1/2	1 1/2	1 0	—	0 17 5	24,000	Witwatersdrd.	3, Budge-row, E.O.
Mitchell.....G	6/7 7/-	7/-	1 0	-4 May '90	1 0 0	200,000	Witwatersdrd.	Warnford-court-I	Sutherland R.....G	-9/9 1/3	1/3	1 0	—	1 0 0	220,000	Witwatersdrd.	1, Old Jewry
Modderfontein ..G	6/7 7/-	7/-	1 0	—	1 0 0	240,000	Witwatersdrd.	Kimberley	Trans. Coal Trust..G	7/6 8/6	8/6	1 0	—	1 0 0	255,700	Witwatersdrd.	75, Old Jewry
Modderfontein ..G	1/6 2/6	—	1 0	—	1 0 0	120,000	De Kaap	8, Old Jewry I	Trans. Est. & Dev..G	—	—	1 0	1/- Dec. '92	1 0 0	250,000	Witwatersdrd.	75, Old Jewry
Moody's (15/- p.)G	—	—	—	—	—	—	De Kaap	8, Old Jewry	Trans. Gold.....G	1/- 1/6	1/6	1 0	—	1 0 0	250,000	Witwatersdrd.	33, Cornhill
Namaqua.....G	17/6 22/6	22/6	2 0	2/6 July '91	2 0 0	188,662	Namaqualand.	54, Leadenhall-bldg.	Trans. Land (14/3p)G	20/- 22/6	22/6	1 0	—	1 0 0	69,594	Witwatersdrd.	110, Cannon-street
New Chimes.....G	1 1 1/2	1 1/2	1 0	—	1 0 0	96,000	Witwatersdrd.	8, Old Jewry, E.O.	Un. Ivy Reef.....G	11/3 13/9	13/9	1 0	—	1 0 0	100,000	Witwatersdrd.	23, St. Swithin's In.
New Consol.....G	1 1 1/2	1 1/2	1 0	—	1 0 0	195,000	Langlaagte	4, Bishopsgt-st. Wt.	Un. Langlaagte ..G	—	—	1 0	—	1 0 0	100,000	Witwatersdrd.	1, Crosby-square-I
New Oresund.....G	14 1/2 14 1/2	14 1/2	10 0	—	10 0 0	783,000	Transvaal	5, Copthall-buildings	Van Ryn.....G	—	—	1 0	—	1 0 0	100,000	Witwatersdrd.	1, Crosby-square-I
New Premier.....G	3 1/2 3 1/2	3 1/2	1 0	4/- July, '93	1 0 0	230,000	Witwatersdrd.	2, Draper's-gardens.	Victory Hill.....G	3 3/4 3 3/4	3 3/4	1 0	—	1 0 0	132,000	Witwatersdrd.	8, Old Jewry
New Primrose.....G	3 1/2 3 1/2	3 1/2	1 0	15% Sept. '93	1 0 0	160,000	Witwatersdrd.	1, Crosby-square.	Village Main Reef..G	—	—	1 0	—	1 0 0	50,000	Witwatersdrd.	25, Budge-row, E.O.
Nigel.....G	—	—	—	—	—	—	Witwatersdrd.	8, Old Jewry	Virginia.....G	—	—	1 0	—	1 0 0	150,000	Witwatersdrd.	24, Leadenhall-bldgs.
Noitgedach E.G.	1 1/2 1 1/2	1 1/2	1 0	25/- Nov. '89	1 0 0	160,000	Transvaal	4, Sun Court, E.O.	Vogelstruis.....G	4 1/2 4 1/2	4 1/2	1 0	10% Nov. '91	1 0 0	55,000	Witwatersdrd.	19, Bury-street-I
Ophir Corcoran.....G	3 1/2 3 1/2	3 1/2	1 0	—	1 0 0	254,000	Witwatersdrd.	31, Lombard-street.	Wemmer.....G	—	—	1 0	—	1 0 0	250,000	Witwatersdrd.	19, Bury-st., E.O.
Orange F.S.E.....D	1/6 2/-	2/-	1 0	—	1 0 0	373,043	De Kaap	10, Moorgate-street.	Witwatersdrd.....G	2 1/2 2 1/2	2 1/2	1 0	—	1 0 0	120,000	Witwatersdrd.	Warnford-court-I
Oriental.....G	1/6 2/-	2/-	1 0	—	1 0 0	500,000	De Kaap	Jamaica-hgs. Cornhill	Woluter.....G	1 1/2 1 1/2	1 1/2	1 0	—	1 0 0	30,727	Witwatersdrd.	8, Old Jewry I
Otto's Kopie.....G	—	—	—	—	—	—	Kimberley	110, Cannon-st., E.O.	Worcester.....G	—	—	1 0	—	1 0 0	150,000	Transvaal	19, Birch-lane, E.O.
Parli Central.....G	—	—	—	—	—	—	Transvaal	25, 10, Hol. Vis., E.O.	Zwartland Land ..G	—	—	1 0	—	0 16 0	150,000	Transvaal	19, Birch-lane, E.O.

THE EDITOR'S LETTER BOX.

* * * We wish it to be understood that we do not hold ourselves responsible for, and do not necessarily endorse, the opinions of correspondents. All communications must be accompanied by the names and addresses of the senders, though these need not necessarily be published.

CORNISH MINING CAN BE REVIVED AND HER MINERS WILL STAY AT HOME.

TO THE EDITOR OF "THE MINING JOURNAL."

DEAR SIR,—As your valuable Journal is found all over the mining world it reaches us at our Asbestos Club, and I can assure you we find it very interesting. The managers here come from Cornwall, Wales and Germany, but anything from Cornwall is of greatest importance to us, for it seems as if it were a voice from home. In your issue of November 18th there was a very interesting article entitled "Cornish Mining: Can it be Revived: An Australian Remedy." The main point elaborated upon was how to improve mining in Cornwall. To my mind this could be done in many ways, for the tin and copper is not all dug out of her mines yet, nor do I think all her mines have yet been discovered. Mining might yet revive and investors find profitable investments if the work in Cornwall were pushed ahead as it is here and in the States. It is a well-known fact that in Cornwall the miners do not receive more than the average rate of wages, which in many cases is not enough for the support of a family. This is an outrage upon the miner and an injury to Cornwall, and to those whose money is invested there, seeing that the skilled miner does not receive any more money than those of ordinary ability and of less practice. The custom is to set a gang so many fathoms to work. This enables them to see how much will be needed to give them the wages allowed by their particular mine. The men know the old dodge and work accordingly; they could often get £50 per month more than their bargain, but they know if they did so their price would be cut down in the next month; so they sit down when they would rather be working. Where the takings are reckoned by the month, the men, if they got what is allowed, would stay away from the mine so as to keep to the old price, and in many cases the old price is a good one, though they could get more if it were allowed. Who is responsible for not allowing it I do not know, but such is said to be the case. There is another class of miners who never get the full amount, because there is as much scope in the mine for "spending ground" as in any other class of labour, where work is done by contract. Hence the skilled miner in Cornwall must not get all he could get, but only what others not skilled are allowed to get. The fact is that all men could do better on the Captain's prices if they were allowed, for it is the custom with the miners to sit down when they get into the mine and tell stories, sing, and waste a good bit of time every day in order to earn the average wages alone. If every manager in Cornwall were to give each gang a contract for the month, and tell them to push the work ahead and get all they could, the result would be that the stamps would have to run much faster, and at the end of the month it would be found fully one-third more ground would be "spent," and of course one-third more of tin and copper raised. This would encourage the men to work as hard as possible. When a shaft is to be sunk the plan should be to set the contract for the number of feet to be sunk, do the same in sinking from level to level, and pick out the best men for these contracts. In this way the miner would get more wages on the same price per fathom, the output of tin and copper would be increased in proportion to the ground spent, and work that now takes six months would be done in very nearly half that time, and with no more cost. Thus it will be a big saving to companies as to the water charges and other expenses, which must continue until the shaft is going down, whether it takes three months or six. This plan of work will put every man on his own merit, and I know he will do his best to get as much money as he can. The sitting on the pick handle, telling stories, and wasting time will all be done away with, and the men themselves will get good wages, companies will have better returns, and the mining industry in Cornwall will be revived to an extent which the oldest man now living does not remember, and an increase of more than one-third—such as I am sure would result from an adoption in Cornwall of our American system—would be from 20 tons of tin per month, which at the low figure of £50 to £30 a ton would be equivalent to an additional £500. After there had been deducted from this the £120 increase on labour, a balance of profit would be left to the company of £380. Whether the mine were large or small, or rich or poor, it would be improved under this arrangement. There is another thing the captains must see to, and that is that their men should never be stopped from their work to wheel away the stuff, as there will be so much tin or copper lost at every stoppage. The miners should remain at their work, and a man should be appointed to look after the stuff so as to keep it out of the way of the miner. Tramways should be used instead of barrows. In this way young men who wish to go underground will have a chance to learn something, while all the miners will be kept at his picks. At present there are many days lost to the miner by his having to wheel his own stuff when he should be digging the ore. The captains should also see that the

miner has his tools sent down in the morning and sent up again when work is done, which will save him the bother of lugging about the drills on his back, and carrying the picks in his hand, which is enough to cripple him. If this change be made some miners will get more than they do in this country, and will not wish to leave home. Mines that are not paying will then pay, and those that are paying dividends will pay larger ones. Capital will be invested in Cornwall instead of in other countries where it is now sent. Let those in charge of the mines arouse themselves. They are now rather behind the age, though no man knows better what to do than our good old captains, who are, however, crippled by the present system. At present they are not paid sufficient to make them value their places. They should be given more and should know that they must see for themselves that the work is pushed on. The tribute system should be looked after more closely, and the output improved. When men have a good bunch of ore they do well. When the ground is poor they get downhearted and do not work as hard as they should, in the hope of borrowing something until they are able to pay it back. This is a good plan if the tributor is a good man. In that case, if his pitch is poor, he should be bound to stoop so much ground before he is entitled to "eat," as they call it. Then if the ore is in it he would get wages; if not, he has done honest labour and should be entitled to the amount the company allow to tributors until he could pay it back. The captain should do all he could to increase the value of his mine, as we do here in America; and I am sure from experience that the prices for spending ground in Cornwall are better than ours. I am from Crowan Parish, Cornwall, and was brought up in the mines. I have been captain and manager in the States and here for over 23 years, and have found the only way to get on is to set contracts for the month, and then push the men on to get as large an amount of ore as possible, in order that they may get big pay. If this were done in Cornwall, mining would flourish, and men would be encouraged to do their best and all would be benefited by the change.—I have the honour to remain yours truly,

Matthew Penhale.

Black Lake, Megantic County, Canada, December, 1893.

SPITZKOP FARM GOLD COMPANY, LIMITED.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR,—The record of the company (formed in 1883 and reconstructed in 1887, 1889 and 1893) has been protracted litigation, expenditure, and failure. A fourth attempt to reconstruct seems an early certainty. Besides having exhausted its funds, worked at a loss and contracted a loan of £2000 at 10 per cent. (with interest thereon in arrears to the amount of £300) and other debts, the company was last January in immediate want of funds. The directors' effort to raise £5000 (by 10 per cent. first mortgage debentures) resulted in applications for only £555, though the time for receiving them was extended—a proof of the shareholders' disbelief in the concern. Reconstruction was then resorted to, capital to be £145,000 in £1 shares, credited with 19s. paid, leaving a liability thereon of 1s. The Chairman at the meeting last August, in answer to a shareholder, expressed unwillingness to go to allotment unless 100,000 shares were applied for. The company's indebtedness is about £3000, besides directors' fees in arrears for three years, and cost of liquidation, etc. There is a yearly payment of £250 to the Government. No meeting was held between 1890 and 1893. The application list was announced to close on October 31, but, for obvious reasons, the date was postponed to November 7, and in spite of this extension of time only 86,092 were allotted—a further proof of the shareholders' disbelief. The application forms were accompanied by an invitation to apply for additional shares on the same terms (viz., 6d. on application and the balance of 6d. when required) and forms were sent out for the purpose. Although only 85,092 shares have been applied for the liquidator issued a circular on November 15, saying he could only allot additional shares by tender. Fancy, under such circumstances, asking for a premium! It will be wonderful if the shares get placed at all. Are those who refused to apply for the 59,908 shares (sacrificing their holdings rather than incur the liability) likely to tender for them at a premium? Is it probable that holders of the 85,092 shares will offer a premium for any of the forfeited 59,908 shares, especially when they know what a failure the reconstruction has been? The liquidator apparently does not know when forms for tendering will be issued, or the date for closing the list, and awaits the directors' instructions. I am informed they have decided not to have them tendered for at present. Why this delay? The allotment of the 85,092 shares (even when fully paid) can only produce £4254 12s. What balance will there be after payment of the loan and other liabilities, including cost of liquidation, cost of giving the mortgage a legal mortgage (the registration of this in the Transvaal alone will cost the company £200), Government rent, and directors' fees for three years? If the mortgage calls in his loan before the interest due thereon has further accumulated and before the money has been spent, he will save himself from loss. The work, expenditure, and loss of the last ten years prove that the property cannot be worked at a profit, and that, from a mineral point of view, it is worthless. Its area is 7280 acres, which, for agricultural purposes, is not worth more than 1s. per acre. Therefore, its freehold value is less than £364, and its owner liable to the Government for a yearly payment of £250. It is evident that had there been no reconstruction, the property would not be worth the mortgage's expense and trouble

of foreclosure. If the company had money in hand, no debts, and no rent to pay to the Government, the 85,092 shares (when fully paid) might be estimated at 1d. each, but under the existing circumstances, they have no value whatever. In view of the sudden rise in the market quotation of these shares, their inability to retain it (in spite of their reported scarcity), and their present absurdly high price, I advise holders to realise while able. The sooner such companies are consigned to oblivion the sooner will the credit of others rank higher. Then, and not till then, will mining concerns, with any fair promise of ultimate success, receive the attention of speculative investors they deserve, but have hitherto failed to obtain owing to the oft-repeated heavy loss sustained by the public in companies which should never have been floated, and its consequent general disgust and mistrust. The directors of many companies are the only persons who benefit by keeping them in existence by means of reconstruction, and this at the expense of the shareholders. Directors have fees; shareholders, instead of dividends, the hope deferred that maketh the heart sick. Happy the day when "on a change tout cela." The supineness of shareholders and their submission to directors are the cause of many of their losses. Directors' remuneration should be based solely on a percentage of net profits. This would be payment by result, and shareholders would receive dividends before the directors could draw any fees. The advantages of such a system are obvious, and, if it were enforced, would soon be obtained.—I am, etc.,

"SPITZKOP."

THE FORBES REEF GOLD MINING COMPANY, LIMITED.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR,—The attempt (if successful) to reconstruct this company, giving each holder one new for every four old shares with a liability of 2s., will usher into existence a third company bearing this title. A report on the property made by a Mr. Wright, while open to inspection at the office, the directors have refused to circulate among the shareholders. How can the latter, at a distance from London, be fairly expected to incur the trouble, loss of time, and expense of a special journey for this purpose? The cost of stamping the proxy forms would probably have sufficed both to print and forward the report. What can it contain to justify such secrecy and strange conduct? The reported explanation of the Chairman on the 24th November at the meeting (when only 68 out of a total of 1400 shareholders were present) will, doubtless, surprise and annoy many, and amuse not a few. I strongly advise shareholders not to join this reconstruction until they have inspected Mr. Wright's report, referred to all the reports of meetings, balance sheets, and reports since 1885 (in which year the original company was formed) carefully reviewed the past history and present condition, and estimated the future prospects (?) of this unfortunate concern, and ascertained whether there is even the remotest chance of the new company proving anything but a dismal failure, with an early probability of yet another reconstruction with a heavy liability. There is an annual payment of £300 to the Swazi King. If some benevolent shareholder would inspect and copy Mr. Wright's report and ask you, Sir, to publish it in an early issue, matters would be facilitated for, and a great favour conferred on, those who have not yet seen it and are unable to go to town for the purpose. If my suggestions are acted upon, I believe shareholders will recognise the wisdom of cutting their loss in this concern and refusing to throw good money after bad. Indeed, my advice to them would be to quickly sell their shares for anything they will fetch, and thus escape the 2s. liability and a future loss; and, having done so, to invest the proceeds, together with the 2s. per share saved, and any spare capital, in the shares of the "La Plata Mines (Limited)," which can still be bought at 1s. each. I am convinced the latter company has prospects second to none in South Africa. The shares are of a nominal value of 5s. (4s. 3d. paid), and I doubt whether the company will ever require to call up the final 6d. Besides its magnificent properties in Mozambique, it possesses a good silver mine in Colorado, U.S.A., which is being worked at a profit, in spite of the present low price of the white metal. On their South African prospects alone, I expect to see these shares command a high premium.—I am, etc.,

"MOZAMBIQUE."

ST. AUGUSTINE MINE, LIMITED.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR,—This company (already twice reconstructed) has spent £100,000 on the property, sunk a useless shaft, and provided inadequate machinery. Result? The discovery of a few hundred pounds worth of small diamonds! Before shareholders are the owners of this property and entitled to the profits therefrom, a liability of £250,000, on account of royalty certificates, has to be discharged; meanwhile they must work for the benefit of the holders thereof, and, in addition to this, pay a yearly rent to the Government of £121 8s. and a royalty of 1 per cent. on gross profits. Considering the ridiculous purchase price (over £710,000) the royalty certificates ought to be cancelled. Their existence is unfair, for, while the holders have already witnessed two reconstructions, are now looking on at a third, and will probably see several more, they have not incurred, and cannot incur, any liability. If the third reconstruction fails to prove the existence of a genuine diamond mine, the unfortunate shareholders sustain a further heavy loss; even if this be proved, more money by a

fourth reconstruction) will be needed to work the mine. Under the most favourable circumstances, many years must elapse before the long-suffering shareholders can expect dividends, by reason of the prior charge of £250,000. It is probable that such a sum is much more than the total value of the diamonds in the mine. The position of the royalty certificate holders is quite untenable, for the certificates are simply waste paper, unless the company reconstructs, and until a true diamond mine has been discovered. No reconstruction should be attempted until the certificate holders recognise this and—in their own interests—come to terms with the shareholders. Instead of the committee's plan of reconstruction I propose the following:—(1.) A new company with a capital of £50,000 in £1 shares; 9799 shares credited as fully paid, 40,201 shares for subscription at par, payable 5s. on application, 5s. on allotment, the balance in calls as required. This would provide a working capital of £40,201. (2.) Give one fully-paid share in exchange for every 50 old shares (absorbing 9299 shares), and one fully-paid share in exchange for every £500 of the certificate holders' claim (absorbing 500 shares). The latter is but a small portion of their original claim, but surely they will see the wisdom of accepting something in preference to losing everything. (3.) Offer the 40,201 shares first to the holders of the 9799 fully-paid shares, then the balance (if any) by public subscription, or arrange with a syndicate to take them up. (4.) Sink a new shaft 1200 feet and provide adequate pumping machinery. This will cost at least £40,000. (5.) Appoint as directors the three largest holders of partly-paid shares, to continue in office so long as they remain the largest holders; remuneration to be a percentage of net profits, subject to a maximum sum. (6.) Employ a capable manager. Thanks are due to a shareholder for calling attention to the absurdity of "office expenses, rent, and secretary's salary," amounting to £1200 a year. This represents more than 20 per cent. of the market value of the company! How much have the directors drawn in fees since it was floated? Sending out "thorough temperance men" the Chairman considered a cause for congratulation; the shareholders found it one for indignation, for directly the men got there the mine was filled with water. We hear it has since been pumped out; we know we are being "pumped out" now. This has been the shareholders' fate for many years. I consider the directors' resignation a cause for congratulation.

I am, &c.,

"ST. AUGUSTINE."

GOLD IN WALES.

TO THE EDITOR OF "THE MINING JOURNAL."

DEAR SIR,—I was very much pleased to read your article on the "Comparison of Home Mining with South Africa," for I am fully convinced from personal inspections that the gold-bearing stratum of North Wales contains immense quantities of auriferous ores, only requiring a moderate capital to raise and treat them very profitably. Nature has formed valleys where the lodes outcrop, and adit levels can be driven upon them into the mountains, which is the most economical way of mining. There is plenty of water power to drive the necessary machinery. Up to the present only the free gold is treated by amalgamation, but even by this process a great deal is lost, the fine gold being carried over the plates with the water. Now, to remedy this, and also to treat the sulphurets which contain about half the gold in the ores, I would suggest the whole of the ore to be crushed, and concentrated up to about 10 per cent. of its bulk by the dry process, and sold according to assay, for which there is a ready market. After the mines are opened out and large quantities of gold ores are raised, works for treating all the ores in the district should be erected.—Yours faithfully,

162, Ebury-street, S.W.

JOHN L. M. FRASER, M.E.

LATEST FROM THE MINES.

CABLEGRAMS AND TELEGRAMS.

LADDIN'S LAMP.—The following cablegram has been received from the mines:—"150 tons of ore have been crushed during last fortnight, yielding 780 ounces of gold. The rich ore continues in the stopes above the 300 feet level. Have resumed sinking Jackass shaft." The above cablegram was despatched from the mines on Monday, but has been delayed in transit through interruption of communication on the Australian land lines.

Brilliant Block.—The directors have received the following cablegram from Charters Towers:—"Have crushed during the fortnight 485 tons of quartz for 479 ounces of gold. Have declared dividend of 6d. per share payable on Tuesday, January 30. The approximate value of the above return is £1650."

Buffelsdoorn Estate and Gold.—The returns for month of December show a profit of £5050.

Coromandel.—The directors have received the following cablegram, dated 22nd January, from Mr. A. Llewellyn, superintendent:—"420 cross cut has cut the lode 18 inches, assaying 1 ounce 4 dwts. per ton."

Craven's Caledonia.—The following cablegram has been received, giving result of crushing, dated Charters Towers 19th January, 1894:—"335 tons, yielding 560 ounces gold. Expect to commence in about two week's crushing."

Cumberland Gold.—The directors report the receipt of a cablegram from the mine as follows:—"In consequence of the heavy rains dam burst; damage very serious; will endeavour to make temporary arrangement; have lost 10,000 tons of tailings."

El Callao.—Messrs. Baring Brothers and Co. (Limited) have received the following telegram from El Callao Mining Company:—"926-950 ounces of bar gold produced for past fortnight by El Callao Mine and 1578-1600 ounces by La Colombia Mine."

Flkhorn.—"Bullion produced in the mill for the week ending January 20, 8200 ounces."

Guadalquivir Quicksilver.—The quantity of quicksilver drawn off during the week ending January 18th, as cabled from the mines, amounts to 2900 lbs.—38½ flasks. The cable further states that the "mine is improving."

Jay Hawk and Lone Pine.—The directors have to-day received the following telegram from the manager, viz:—"Estimate returns for last week 9300 ounces. Gradual increase in returns may be expected. The lode in the 1400 south is opening up well."

Kaboronga.—The following cablegram has been received from the manager at the mine:—"Drive is now in 745 feet; rock improving; indications favourable."

Kapang.—The directors have to-day received the following telegram from the manager, Captain W. H. Argall:—"Have resumed sinking the shaft, and are down 5 feet. We are erecting the rock drilling plant with all possible speed. Have crushed 40 tons quartz which has yielded 50 ounces. No material change in the workings."

Mill's Day Dawn United.—Three week's crushing ending 20th January, 1894:—"Tons crushed, 3050; obtained 2189 ounces gold; approximate value, £7500. Dividend of 3d. per share declared payable Thursday, 25th January."

Mysore Roofs.—The directors have received the following cablegram, dated 22nd January, from Captain Scantlebury:—"Underlie shaft. The quartz is very rich."

Mysore Wynaad Consolidated.—Tank Block. A telegram received from this company's representative in India, dated the 19th instant, reports that the assay value of the ore in the 354 feet level of the south shaft is 1 ounce 7 dwts. per ton, and that the lode in that shaft is widening.

New Queen.—The directors have received the following cablegram, dated Charters Towers, 20th January, 1894, giving result of crushing for past fortnight:—"220 tons, yielding 465 ounces gold. Have not been able to ship bullion; heavy floods prevail."

Ouro Preto.—This company has received a cablegram from the mines giving the return for the month of December as follows:—"3118 tons produced 30,022 grammes=965 ounces."

Tolima.—The Tolima Mining Company (Limited) have received a cable from their superintendent, stating that "the 90 east, main lode, is now worth \$500 a fathom."

Victoria and Queen Gold.—The following cablegram has been received from head office, Charters Towers, dated January 20:—"Have crushed 89 tons for 276 ounces of gold."

Wentworth Gold Fields Proprietary.—The following cablegram has been received from the mines:—"960 tons of ore have been crushed during last four weeks, yielding 1200 ounces of gold. This ore has been obtained from the several places mentioned in last telegram. Have resumed sinking the new main shaft; the depth attained to date is 635 feet." The above cablegram was sent off from the mines on Monday, but has been delayed by the interruptions of communication on the Australian land lines.

Wassau (Gold Coast).—The produce of the mine for the month of November last (referred to in circular of the 30th ult.) realised £1308 6s. 1d., being 336 ounces standard. The mill worked 20 days 8 hours, and crushed 280 tons of ore, giving a yield of 1 ounce 2 dwts. per ton. Cablegrams have since been received advising the remunerations for last month as 282 ounces, and a yield of 1 ounce 3 dwts. per ton. The output this month was affected by the Christmas holidays.

Witwatersrand Gold (Knights).—London agents have been advised by cable from head office that the board will resign on March 13, and the members offer themselves for re-election.

REPORTS FROM THE MINES.

We find it necessary to announce that, owing to the vast numbers of mining reports, and items of mining intelligence which reach us invariably very late—up to, and frequently after the time of going to press—it is impossible to guarantee the insertion of all of them in the issue in which, in ordinary course they should appear. We always endeavour, however, to make this important feature as complete as possible, and if the secretaries of mining companies, mining captains, and others would kindly make an effort to let their reports, etc., reach us early on Fridays, when it is not possible to let us have them earlier in the week, their doing so would go far to ensure their insertion, and to promote the completeness of our Mining Intelligence.

BRITISH MINES.

Carn Brea.—W. T. White, John Daddow, William Thomas, John Penhall, January 19: Highbury West. The shaft is down about 15 feet below the 325 fathom level. The 310 fathom level west of shaft is being driven in a south westerly direction in elvan so as to meet with the lode we are sinking on in the 298 winze. The lode in the 298 winze is worth £25 per fathom. This winze is down about 5 fathoms and as far as we have sunk is south of the elvan and about 7 fathoms in advance of the 310 end. The lode in rise in back of the 293 fathom level west is worth £20 per fathom. Rise up 7 fathoms. We hope to communicate this with the 325 winze during this month.—Highbury East: Haffey's engine shaft is cleared to 4 fathoms below the 310 fathom level. The shaftmen are cutting hopper at this level for a speedy discharge of the stuff. This we hope to complete next week. The lode in the winze sinking below the 285 fathom level is worth £12 per fathom. The lode in the 170 end west of cross cut on north lode is worth £12 per fathom, in the rise in back of the 170 fathom level west of cross cut on north lode £15 per fathom.—Old Bump: Since the meeting the shaftmen have been cutting elstern pit at the 244 fathom level and fixing lift. This work we hope to complete in a day or two and commence sinking next week. We have a pair of men blasting in south side of T-gang's lode at the 244 fathom level 10 fathoms west of shaft, this has the appearance of a caunter lode with a south east bearing worth £10 per fathom. The lode in the 244 fathom level east of cross cut on Druid's north lode is worth £12 per fathom. End 6 fathoms east of cross cut.

Cook's Kitchen.—Josiah Thomas, Charles Thomas, Thomas Uren, January 20: The 420 end of engine shaft which is being driven on the east side of the lode is producing a little tin. This end is now 9 fathoms short of No. 2 winze, and when communicated there we shall cut through the lode. No. 2 winze is sunk 11½ fathoms below the 420 end, and is worth for 9 feet long £25 per fathom. The 394 end of engine shaft is worth £14 per fathom. The 380 end of engine shaft is worth £20 per fathom. The 388 end of engine shaft is worth £20 per fathom.

Devon Great Consols.—William Clemo, January 25: Wheel Anna Maria engine shaft: The stopes in the back of the 110 fathom level east is yielding 10 tons of mundle ore per fathom.—Field shaft south lode: In the stopes in the bottom of the 130 fathom level east the lode is producing 2 tons of copper ore and 7 tons mundle ore per fathom.—Wheel Josiah's shaft: In the stopes in the bottom of the 103 east the lode is yielding 3 tons mundle ore per fathom.—Agnes shaft: In the stopes in the back of the 101 west the lode is worth 4 tons of mixed copper and mundle ore per fathom. The stopes in the back of the 90 fathom level west is producing 3 tons of copper and mundle ore per fathom.—Wheel Emma, Thomas shaft: The stopes in the bottom of the 100 east is worth 1 ton of copper ore and 3 tons mundle ore per fathom. The lode in the stopes in the bottom of 100 east is a good lode yielding 2 tons copper ore and 15 tons mundle ore per fathom. Lode in stopes back of 100 east is also a good lode, worth 2 tons of copper ore and 13 tons mundle ore per fathom.—Inclined shaft: Stopes in back of 150 east will produce 2 tons copper ore and 7 tons mundle ore per fathom. In stopes back of 150 east lode is worth 2 tons copper ore and 5 tons mundle ore per fathom. Lode in stopes back of 112 is producing 2 tons copper ore and 2 tons mundle ore per fathom. Stopes in back of 100 west is worth 4 tons mundle ore per fathom.—New shaft, new south lode: Stopes in bottom of 190 east will produce 2 tons copper ore and 4 tons mundle ore per fathom.—Watson's engine shaft: In the 172 east the lode is 3½ feet wide producing 1 ton copper and mundle ore per fathom. In the 162 east the lode is 4 feet wide yielding 4 tons copper and mundle ore per fathom. Very promising. In the 148 east the lode continues good yielding 8 tons copper and mundle ore per fathom. The stopes in the back of the 172 east is yielding 6 tons of copper and mundle ore per fathom. In the stopes in the bottom of the 148 east the lode will yield 6 tons of copper and mundle ore per fathom. Stopes in the back of the 148 east is worth 5 tons copper and mundle ore per fathom. Stopes in the back of the 138 west is yielding 6 tons copper and mundle ore per fathom. The weather has taken a favourable change, and the machinery throughout the mine is in full work.

Great Laxey.—W. H. Rowe, January 24: The branch of lode in the 295 and north of Welsh shaft shows no change of consequence since last report. Except that there is rather too much underlie it has every appearance of being the main part of the lode. In the 278 end driving north of Dumbell's shaft the lode has varied in value of late from barely payable stuff to £7 and £10 per fathom, but in the last 6 feet, and in the present forecast it has improved and is worth £15 per fathom. The four stopes in sole of the 266 level are worth at present £20, £25, £15, and £18 per fathom respectively. The 243 cross cut east has intersected a vein or branch, which in position may possibly prove to be the east lode. As it shows no indication of ore we hope this is not the case, and shall at any rate continue cross cutting some distance further yet. There is no alteration worth mentioning at any other point.

Green Hurth.—W. Gray, January 19: Ore in stock, December 27, 38 tons; ore raised for month, 17 tons; total, 55 tons. Ore delivered, deduct 42 tons 12 cwt.: ore in stock, 10 tons 8 cwt. Annie's Vein: At the south forehead the vein continues poor for lead worth about 18 cwt. per fathom. The vein is fully 3 feet wide, and has a kindly appearance. I am expecting an improvement here almost every day. The stopes in the back of the above working is not so rich as previously reported worth 1 ton per fathom. The drive on Annie's vein from the sump at north end, this is looking healthy, worth 2 tons per fathom. North-west branch above 31 level. The north end shows a slight improvement on the week's working. At the south end there is a decided improvement, worth 2½ tons per fathom. We have delivered 35 blings of ore to the Nenthead Company this week. Fresh weather here all week, with heavy rainfall.

Leadhills.—T. Newbigging, January 22: Brown's Vein. We finished the sinking of Wilson's and Jeffrey's shafts last Wednesday and Friday respectively. The 165 fathom level south of Jeffrey's shaft is in a vein 5½ feet wide, nicely mixed with spar and ore worth 10 cwt. per fathom. The 160 fathom level north of Wilson's shaft is in a vein above 6 feet wide, showing kindly stone well mixed with spar but without ore. The stopes above the 131 north of Jeffrey's shaft is worth 30 cwt. of ore per fathom. The 115 fathom level north of Jeffrey's shaft is in a vein above 4 feet wide, showing a good mixture of spar but only one spot of ore. Nos. 1 and 3 stopes above this level north of Jeffrey's shaft are worth 30 and 16 cwt. of ore per fathom respectively. Cleaning out No. 2 stopes. The stopes below the 35 south of Jeffrey's shaft is worth 25 cwt. of ore per fathom. The stopes above the 31 south of Jeffrey's shaft is worth 25 cwt. of ore per fathom. Barrowdale vein: Gripp's adit, north of George's Roust vein, is in a vein above 4 feet wide, composed of kindly stone and spar but the latter just now altogether of the character for producing ore. Gripp's adit south of

George's Roust Vein is in a vein 4 feet wide of nice looking stone and spar with occasional spots of ore.

South Condurow.—Wm. Rich, Wm. Thomas, Fred Rich, January 24: The ground continues favourable for driving the 153 crosscut south. We have intersected in this crosscut a small vein or branch dipping north. The 153 and west on the flat lode is without alteration to notice. The engine lode in the 153 west is worth £8 per fathom for tin. The end continues to let out water from the

West Kitty.—John Williams, Joel Hooper, January 25: The 108 fathom level driving west is worth £8 per fathom. The 94 fathom level driving west is worth £2 per fathom. The 84 fathom level driving west is worth £12 per fathom. The 60 fathom level driving east on the south part of the lode is worth £4 per fathom. The lode in this end is disordered by a gossan crossing the end. The 60 fathom level driving west is worth £15 per fathom. We have holed the rise in back of the 60 crosscut to the winze in bottom of 120 fathom level, and now we have good ventilation in the south part of the mine. Our stopes and tributaries are about the same as last reported.

Wheal Metal and Flow.—Stephen P. Curtis, January 17: We have completed a-curing the back and sides of the intermediate level, and the men have just recommenced driving. The turn sheave for the incline tramway is fixed, and all the other work being prosecuted with all speed.

Wheal Metal and Flow.—Stephen P. Curtis, January 24: The incline tramroad is about completed, and if all goes well it will be set to work to-morrow. The tooth wheels for working the incline are fixed. There is nothing new in our underground operations calling for remark.

Weardale.—Report on Weardale Company's Mine for week ending January 20: Groverake: Slate all drift east sparry vein rather better for ore but slow to drive end worth 12 cwt. per fathom. Firestone drift east no change worth 14 cwt. per fathom. Adamson's drift west vein 2 to 3 feet wide of spar poorer in ore worth 12 cwt. per fathom. Rise from Rowell's old ground to 30 fathom level vein continues sparry but poor in ore and hard to work worth 8 cwt. per fathom. 60 fathom level east vein sparry with a little more ore worth 6 cwt. per fathom. 60 fathom level west vein sparry with a little more ore worth 6 cwt. per fathom. 60 fathom level south vein sparry with a little more ore worth 6 cwt. per fathom. 60 fathom level north vein sparry with a little more ore worth 6 cwt. per fathom. 60 fathom level east vein sparry with a little more ore worth 6 cwt. per fathom. 60 fathom level west vein sparry with a little more ore worth 6 cwt. per fathom. 60 fathom level south vein sparry with a little more ore worth 6 cwt. per fathom. 60 fathom level north vein sparry with a little more ore worth 6 cwt. per fathom. 60 fathom level east vein sparry with a little more ore worth 6 cwt. per fathom. 60 fathom level west vein sparry with a little more ore worth 6 cwt. per fathom. 60 fathom level south vein sparry with a little more ore 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NEW FLOATING STEAM FIRE ENGINE.—A trial was made on Tuesday at Messrs. Merryweathers' Wharf, Greenwich, of a new floating steam fire engine, which has been constructed by that firm for use in the Port of Alexandria. Some years since Messrs. Merryweather built a steam fire float, now in service in Alexandria harbour, but the new craft is of a different description, being more powerful, and having a pumping capacity of 2000 gallons per minute. In one important particular this vessel differs from most of the floating extinguishers in use in this country and abroad, in that she is propelled by means of hydraulic jets from the fire engines on board, in place of propulsion from a screw. The craft is self-contained, and carries all her apparatus, thus obviating the employment of tugs. The pumps are very powerful, having all the latest improvements, and the experiments demonstrated that the vessel can be handled with the utmost ease, and is able to project her water jets a considerable distance. An interesting display was also made with some of the firm's portable steam fire engines. Adaptations of some of Messrs. Merryweathers' fire appliances have been applied to mining.

METAL TRADES' CIRCULARS.

MESSRS. JAMES LEWIS AND SON'S mid-monthly report on copper, dated Liverpool, January 19, 1894, says:—The market for copper has been adversely influenced by the continued large arrivals from the United States, which are now almost entirely in the form of pig and refined copper in different forms. It is estimated that very little matte will in future be shipped, as most of it is being converted into pig copper in order to save carriage, or despatched before shipment. The value of good merchantable copper has receded £13s. 9d. from £24s. 3d. on the 15th, from which there was a sharp recovery to £24s. 3d. on the 16th, followed by a further decline to £24s. 3d. on the 17th, and on the 18th, the market closed with a recovery to £24s. 3d. and of three months' prompt at £24s. 3d. per ton. Buyers of cash at £24s. 3d. and very limited, many smelters being occupied in furnace material stock taking, which has also had the effect of reducing the with their annual stock taking, and shipments have been on a considerable scale. The copper continues good, and shipments have been on a considerable scale. The returns made by European and American producers are as follows:—

	6 Months Dec. 1893.	6 Months Dec. 31, 1893.	6 Months Dec. 31, 1893.	6 Months Dec. 31, 1893.
European Production... Tons	7,348	40,591	41,048	39,664
American Production... "	10,538	67,291	62,470	62,239
do. Imports... "	1,042	6,252	6,478	6,287
do. Exports... "	8,293	60,016	19,178	17,980

Stocks have increased 845 tons, and the visible supply 403 tons during the past fortnight. Imports to date are 1481 tons and deliveries 1325 tons greater than last year. The arrivals in England and France for the fortnight have been 5876 tons, and the deliveries 5630 tons. The arrivals of Chile in Liverpool have been 955 tons and the deliveries 433 tons, and from other countries 3551 and 3454 tons respectively. The arrivals here and in Swansea from the United States have been 165 tons bars, 1078 tons ingots, and 518 tons matte (Montana), equal to about 2476 tons fine, and in France 523 tons fine. The Chile charters for the past fortnight are advised as 800 tons and exchange 13 1/4d.

Quotations to-day are:—Chile bars and good merchantable copper £24 1/2s. 3d. for cash, and £24 1/2s. 3d. for three months' prompt buyers. English best selected for cash, and £24 1/2s. 3d. for three months' prompt buyers. Ore of good ingots £24 1/2s. 3d. and tough cake £24 1/2s. 3d. to £24 1/2s. 3d. per unit. Produce 5s. regulus and matte 5s. 4 1/2d. to 5s. 6d. per unit.

	1893. Nov. 1.	1893. Dec. 1.	1894. Jan. 1.	1894. Jan. 16.
Chilean in Liverpool and Swansea...	29,785	29,844	30,314	30,336
do. France...	2,301	1,928	1,571	1,411
American in Liverpool and Swansea...	3,871	3,898	4,102	4,177
do. France...	1,425	1,245	779	838
Sundries in Liverpool and Swansea...	1,434	1,589	1,147	1,269
do. London...	4,799	4,713	4,733	4,963
do. G.M.C. in Liverpool and Swansea...	390	379	395	390
Total	43,990	43,577	42,745	43,591

As at advised by mail and cable to date:—
From Chile 2,911 2,907 3,678 3,181
From Australia 920 800 850 900

Total visible supply 47,801 47,384 47,273 47,676
Quotations—Bars, per unit... 24 1/2s. 3d. 24 1/2s. 3d. 24 1/2s. 3d. 24 1/2s. 3d.
Ore, per unit... 5s. 4 1/2d. 5s. 4 1/2d. 5s. 4 1/2d. 5s. 4 1/2d.

The following are the imports of copper (excluding pyrites and precipitate to outputs) from January 1 to date:—

	1893. Nov. 1.	1893. Dec. 1.	1894. Jan. 1.	1894. Jan. 16.
Chile into Liverpool and Swansea...	1068	1292	955	955
America do. do.	1171	1042	2176	2176
Sundries into Liverpool and South Wales...	223	1321	1175	1175
do. into London...	277	280	432	432
Chile into France...	2739	3935	5038	5038
America do. do.	153	100	240	240
Sundries do. do.	12	80	75	75
Total	165	480	838	838
Deliveries do. do.	1728	3703	5030	5030

MESSRS. RICHARDS AND BEE'S metal circular dated 17, Gracechurch-street, January 19th, has the following to say:—Copper: The market has fallen about £1 7s. 6d. since our last issue dated 13th December. The cause of the depression are to be found in the American tariff, and specially the silver legislation of the last few years. We fear that time will be required to restore things to a healthy state even with a large reduction of duties and the repeal of the Silver Bill. This latter is accomplished and the former will doubtless soon follow. It is fortunate that with freedom of trade prosperity must come sooner or later, and we hope it will be sooner.

	1891.	1892.	1893.
English copper wrought and...	51,765	58,518	45,349
Foreign copper wrought and...	11,752	11,388	12,843
Yellow metal...	14,244	14,755	14,575
Total	77,761	84,661	72,767

	1891.	1892.	1893.
Copper in ore...	12,225	12,618	10,923
Regulus and precipitate...	54,771	60,497	53,640
Bars, cake, and ingots...	44,348	35,557	42,018
In pyrites, estimated...	15,405	15,110	15,320
Total stocks in Europe and abroad...	128,359	123,282	121,901

31st December 1893. 56,544 55,745 47,295
Price of Chile bars on 31st December 1893 £24 1/2s. 3d. to £24 1/2s. 3d.
Total deliveries of copper out of public stocks in September, 1893, 16,144 tons; October, 20,517 tons; November, 20,613 tons; December, 13,371 tons.—Tin: Tin has taken a turn upwards during the last day or two. It is to be hoped this movement will continue. At these low prices consumption is bound to increase materially. The delivery of foreign tin of warehouse, London and Holland, is: 1st January to 31st December, 1892, 26,640 tons, against 27,657 tons 1891, and 25,455 tons 1890. The stock of tin in public stocks here and in Holland, omitting Russia in Dutch Trading Company's hands is:—31st December 1893, 6201 tons, prices Straits 41s. 3d.; 31st December 1892, 5879 tons, prices Straits 41s. 3d.; 31st December 1891, 4233 tons, prices Straits 40s. 15s. The shipment of Straits to England 1st January to 31st December 1893, 28,100 tons, 1892 18,700 tons. The shipment of Australian to England 1st January to 31st December 1893, 4250 tons, 1892 4500 tons.

	1893.	1892.	1891.
English... Tons	19,070	16,365	14,511
Foreign... Tons	25,810	22,013	19,787

MESSRS. HARRINGTON AND CO'S Copper Report, dated Liverpool, January 17, 1894, says:—Chile Charters for the first half of January are advised as 800 tons, against 1300 tons for the same time last year. Exchange 13 1/4d. We think it must be admitted by all that the year ending December 31, 1893, was as regards produce markets a most unsatisfactory one, owing principally to financial difficulties in various parts of the world, and the uncertainty of the future value of silver. Metals of course had their share of depreciation in value, but were not the most unfortunate. As regards copper, which at the opening of 1893 stood at £24 1/2s. 3d. per ton for G.M.B.'s declined during the first six months to £24 1/2s. 3d. and in August touched £24 1/2s. 6d. After which in the hopes of improvement in America an advance of about £4 took place, but subsequently the market collapsed and on December 19, which was the last business day for metals, G.M.B.'s were quoted at £24 1/2s. 3d. The cause of the decline originated in America. The combination regarding the combination agreed to by American and European producers came to an end on 30th June, since when America has increased her exports by three times the quantity originally fixed upon. The financial crisis in America practically caused this, as producers could not dispose of their copper in America and were forced to export it. We can now only hope that matters may soon so improve as to enable their home consumption to continue as it would otherwise have done, and with restricted exports our market here, in its present statistical position, would most undoubtedly soon show signs of improvement. Since ours of the 30th, we have had another irregular market for G.O.B.'s and G.M.B.'s, about 6200 tons sold at £24 1/2s. 6d. cash and £24 1/2s. 3d. three months down to £24 1/2s. 3d. and £24 1/2s. 3d. respectively, closing steady to-day at £24 1/2s. 3d. cash and £24 1/2s. 3d. three months.

	Maximum allowed for 6 Months	Maximum allowed for 6 Months	Maximum allowed for 6 Months
European Production... Tons	7248	47,691	42,511
American Production... "	11,538	67,291	62,470
do. Imports... "	1,042	6,252	6,478
do. Exports... "	8,293	60,016	19,178

The total stocks in Liverpool, Swansea, London, and Havre show an increase of 845 tons for the fortnight. The stocks include about 600 tons of copper sold, but not yet delivered to smelters. The visible supply shows an increase of 4 1/2 tons for the fortnight. The stock of English G.M.B.'s in Liverpool remains at 3 tons. Refined and manufactured sorts are dull. Quotations being:—Tough cake £24 1/2s. 3d. to £24 1/2s. 3d., Indian sheets £20 to £20 1/2s. 3d., strong sheets £23, and yellow metal sheets 3 1/2d. per lb.

MESSRS. HENRY BATH AND SON'S fortnightly copper report, dated January 17, 1894, says:—The Chile charters for the first half of this month are advised as 800 tons. The latest exchange is 14 1/4d. The fortnight ended with G.M.B.'s at £24 1/2s. 3d.

from which they dropped to £22 1/2s. 6d. on the 8th instant, but recovered to 7s. 6d. on the 20th; on the 13th case in the market was again manifested, and on the resumption of business on the 15th a fall to £21 1/2s. 3d. took place followed by a drop of 2s. 6d. on the 16th, which, however, was regained during the day. We close steady at £21 1/2s. 3d. cash and £22 1/2s. 3d. forward. Fresh orders for consumption are getting scarce, and consumers are chary of buying against probable requirements. The United States continues to be the pivot on which the entire position turns. The consumptive demand there so far has been disappointing. Her exports for the whole of 1893 amount to rather over 83,000 tons. Those for the first half of January are estimated at 3600 tons. Outside of our figures the arrivals and deliveries at Hamburg, Rotterdam, and Antwerp amount to about 2300 tons fine. Imports of American copper into England have been 2726 tons, and into France 523 tons, or 3249 tons against 1342 tons last year. Total actual deliveries for the fortnight are 5030 tons against 5876 tons imports. The stocks have increased 845 tons. Total visible supply shows 47,591 tons against 47,293 tons last fortnight. Transactions in furnace material comprise about 2245 tons of Quebrada, Mexican, and Chile ore on spot and to arrive at 7s. 3d. to 8s. 3d.; and 350 tons of Bratsberg ore (containing some silver) at 8s. 6d.; 400 tons ordinary Montana matte at 8s. 7 1/2d.; 950 tons of Quebrada regulus at 7s. 17 1/2d.; 59 tons of Argent. Chilli and Peruvian matte on private terms; and 116 tons of Spanish and English precipitate at 8s. 6d. and 8s. 9d. per unit.

MESSRS. ROBEY AND COMPANY.—The well known Lincoln engineering house, Messrs. Robey and Co., of the Globe Works, in that city, have converted their business into a limited liability concern. This course has been taken in consequence of the death of partners, and with a view of facilitating family arrangements. The share capital is £300,000 all of which is taken up privately. An issue to the public is announced of £125,000 Four and a quarter per Cent. First Mortgage Debentures, the price of issue being par. These debentures will be secured by a first mortgage on the freehold engineering works of the company at Lincoln, they will also form a floating charge on all the other property of the company. The management of the business remains unchanged.

EASY MINING.—There are many kinds of mines and numerous inventions for saving precious metals, but the strangest one in the world, says a contemporary, is in Batte, Montana, U.S.A. When mines were discovered in Batte it was found that the water contained in the fissures was strongly impregnated with copper in solution; so much so that iron cages, cars, and tools of all kinds were quickly destroyed by the affinity of the copper for the iron. Only a few weeks' immersion in the waters reduces a mass of iron to pulp, a fact which makes it necessary for all material used in the mine and composed of iron or steel to be replaced at frequent intervals. For a long time the water pumped out of the mine went to waste, as no method was known of extracting the copper from it. After a while, however, a discovery was made that is being utilised to good advantage. Some tin cans found their way into the small stream. In a short time it was noticed that they had every appearance of being made of pure copper, so thickly were they coated with that metal. They were regarded as curiosities by all who saw them, but presently one man saw farther than the "curiosity"—he saw the use. He began to experiment, and found that old cans and iron junk thrown into the water were soon destroyed, leaving in their stead a rich deposit of copper. He thought it would pay to extract the copper from the water by this process, and immediately purchased the exclusive right to the water. Then he put in a series of reservoirs and tanks along the little gully where the water ran. These he filled with the old metal to be had in the neighbourhood, including barrel hoops. At the end of six months he found that the old junk was totally destroyed, and in its place was a sedimentary deposit in the bottom of the reservoirs and tanks, which yielded 80 per cent. of copper.

PRODUCTION OF AMERICAN PIG IRON IN 1893.—The production of American pig iron in 1893 amounted to 7,124,000 tons, or 22 per cent less than in 1892, the whole of the decrease having occurred during the last half of the year. Only 137 furnaces were in blast when the year closed—the smallest number recorded—and no less than 381 were idle. Bessemer steel ingots were made to the amount 3,123,000 tons—a decrease of 25 per cent. on the amount turned out in 1892; and 1,036,000 tons of steel rails were produced—a decrease of 29 per cent. These figures go far to explain why so many of the railway companies seemed to benefit so little from the special traffic generated by the World's Fair. It nearly all went to neutralise the depression in trade, of which the above figures afford such eloquent testimony.

PROVINCIAL HIGHEST AND LOWEST.—Under this suggestive title Messrs. C. Mathieson and Sons have again issued their comprehensive compendium of the provincial stocks, showing the highest and lowest points they have reached during the past 12 months. To this there is added notifications of the various dividends which have been paid during the past few years, so that the would be investor may see at a glance what has been the recent history of any concern into which he may think of putting his money. The information conveyed in this booklet is of the useful kind for which there must be a wide demand, and the clear and convenient form in which it is conveyed is an additional reason why all people interested in the provincial stock markets should welcome its appearance.

THE SCIENCE AND ART DEPARTMENT.—The following permanent inspectors have been appointed under the Science and Art Department:—E. J. Ball, Ph.D., Instructor of Assaying, Royal College of Science, London, R. Blair, M.A. (Edin.), B.Sc. (Lond.), head master of the Public School of Science, Cheltenham. S. F. Dofron, M.A. D.Sc., Fellow of Trinity College, Cambridge. C. Gildard, M.A., formerly Scholar of Trinity College, Cambridge. H. H. Hoffer, D.Sc., Demonstrator in Physics, Royal College of Science, London. Professor D. E. Jones, B.Sc., late Professor of Physics, University College of Wales, Aberystwyth; Director of Technical Education under the Staffordshire County Council. D. S. McNair, B.Sc. (Lond.), Ph.D., Lecturer in Chemistry at the People's Palace, Mile End, London. C. McRae, M.A., late Scholar of Exeter College, Oxford; Assistant Examiner and Occasional Inspector for Science, Department of Science and Art. T. Preston, M.A., Fellow of Trinity College, Dublin, and Professor of Physics to the Catholic University, Dublin. F. Pallinger, M.A., B.Sc., late Burdett Cott's Geological Scholar, Oxford; Organising Secretary of the Technical Instruction Committee of the Devonshire County Council. Captain T. B. Shaw, R.E., Occasional Inspector of the Science and Art Department. H. Wager, Lecturer in Botany at the Yorkshire College, Leeds. It is proposed that these gentlemen should each take charge of a special district, and reside in one of the chief towns in their district.

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*Dunne Castle ... Feb. 2 ... Feb. 10
*Drummond Castle ... Feb. 9 ... Feb. 17
*Amore Castle ... Feb. 16 ... Feb. 24
*Hawarden Castle ... Feb. 23 ... Feb. 31

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*Anglian ...	Jan. 23	Feb. 3	Feb. 10	Feb. 17
*Spartan ...	Feb. 11	Feb. 17	Feb. 24	Feb. 31
*Callian ...	Feb. 11	Feb. 17	Feb. 24	Feb. 31

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C. J. ALFORD, Mining Commissioner of the Mozambique Company, Umtali, East Africa.

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PROVINCIAL SHARE MARKETS.

THE CORNISH MINE SHARE MARKET.

MR. SAMUEL JOHN DAVEY, Dealer in Cornish Mine Shares, Redruth, Cornwall, reports under date of January 25 (4 o'clock), as follows:—We have not had much business in our market this week, but prices have been pretty well sustained. To-day market is steady but inactive. Following are quotations:—Blue Hills, 2s. to 4s.; Carn Brea, 12½ to 13½; Cook's Kitchen, 2s. to 5s.; Dolcoath, 5s. to 7s.; East Pool, 11 to 11½; Killifreth, 3½ to 3¾; Phoenix, ¾ to 1; South Condurrow, ¾ to 1; South Crofty, 1½ to 1¾; Tincroft, 11 to 11½; West France, 1½ to 1¾; West Kitty, 7½ to 7¾; Wheel Agar, 3 to 3½; Wheel Basset, 2½ to 2¾; Wheel Grenville, 13½ to 14; Wheel Kitty (St. Agnes), 12s. to 12½.

MR. MICHAEL WILLIAMS BAWDEN, Mining and Assaying Offices, Liskeard, Cornwall, writes (January 25) as follows:—A general depression continues to pervade the mining market and without some improvement on the price of tin shares will not show any material advance. Buyers are scarce even at the present quotations. Closing prices:—Bottallack, ¾ to 1; Blue Hills, 4s. to 5s.; Carn Brea, 12½ to 13½; Cook's Kitchen, ¾ to 1; Dolcoath, 6½ to 7; Devon Consols, 1 to 1½; East Pool, 11 to 11½; Killifreth, 3½ to 3¾; Levant, 5½ to 6; Phoenix United Mines, 7s. 6d. to 8s. 6d.; Prince of Wales, 1s. 6d. to 2s.; South Condurrow, ¾ to 1; South Crofty, 1½ to 1¾; South France, c.p., ¾ to 1; Tincroft, 11½ to 11¾; West France, 1½ to 1¾; West Kitty, 7½ to 7¾; Wheel Agar, 3 to 3½; Wheel Basset, c.p., 2½ to 2¾; Wheel Friendly, ¾ to 1; Wheel Grenville, 13½ to 14; Wheel Kitty, 11s. to 12s. 6d.

MEASURES. ABBOTT AND WICKETT, stock and share brokers, and mining share dealers, Redruth, write under date of Thursday, January 25th (four o'clock) as follows:—The market has been dull all the week, still at times a moderate business has been done, and there seems a general impression that the lowest point has been reached. Very few shares on offer. Quotations herewith:—Carn Brea, 12½ to 13½; Cook's Kitchen, ¾ to 1; Dolcoath, 6½ to 7; East Pool, 11 to 11½; Killifreth, 3½ to 3¾; Phoenix, ¾ to 1; Polberry, ¾ to 1; South Condurrow, ¾ to 1; South Crofty, 1½ to 1¾; Tincroft, 11½ to 11¾; West France, 1½ to 1¾; West Kitty, 7½ to 7¾; Wheel Agar, 3 to 3½; Wheel Basset, 2½ to 2¾; Wheel Friendly, ¾ to 1; Wheel Grenville, 13½ to 14½; Wheel Kitty, ¾ to 1. Tin, 7½.

MANCHESTER.

MEASURES. JOSEPH R. and W. F. BAINES, stock and share brokers, Queen's Chambers, 7, Market-street, write January 25, 1894, (noon):—A firm and at times quite a buoyant tone has pervaded most sections of the stock and share markets during the past week. This has been specially the case in home rails wherein almost without interruption prices have improved all the week with the movement most pronounced in the later days. All classes of home rails have participated in the advance, but the most prominent instances are as follows, viz.:—South Eastern A 4½, Great Western 4, Great Northern A 3½, North Eastern 3½, Caledonian 2½, and Sheffield A 2½, besides a lot of others between 1 and 2 better. In other departments of rails there are but few notable advances, but there are (like in home rails) no declines to set against the better prices marked. In Canadian, Trunk Preferences are better, First Preference ¾, and Second Preference ¾, but Third Preference are only ¾, and Ordinary ¾ higher. In American the only notable advance are in New York Central \$2, Norfolk Preference \$2 and Milwaukee ¾, the rest of the changes (whilst all on the higher side) being expressed in fractions of a dollar. Consols do not furnish any quotable change on the week. The only alteration in prices of Colonial Government bonds, &c., is a rise of ¼ in Cape of Good Hope Registered. Home Corporation stocks, &c., show the following higher prices:—Blackburn Four per Cent. ¼ to 1½, Birmingham Three and Half per Cent. ¾, and Manchester Three per Cent. ¾, with no declines marked against them. Foreigners are but slightly altered. Numerically the balance of change is on the upward side. The only instance worth naming is rise of 1½ in Italian Rentes, the others being in fractions of ¼ to ½, save for Argentine Five per Cent. and Six per Cent. issues, which are both ¼ to ½ higher, and Spanish Four per Cent. ¾ to 1 lower. The miscellaneous sections of the market present here and there distinct movement both in individual concerns and in sections, but viewed all round advances and declines very nearly balance each other.

BANKS.—With only a straggling record of transactions save for some repeated dealings in Consolidated are irregular as regards changes in current prices. On the better side National Provincial are 1 and Bank of Liverpool ¾, besides a few others fractionally higher, whilst Districts ¾ lower is the first amongst a small list of fractional declines.

INSURANCE.—Hardly anything doing except in Lancashire. Dealings are marked in several cases with little or nothing on the favourable side to put against them.

COAL, IRON, &c.—With the exception of a slight decline in Richard Evans A all the changes are in favour of holders. No ordinary issues are distinctly better, the fully paid being 1½ and the 2½ paid ¾ up, whilst the Preference are ¼ higher. Other advances are as follows:—Palmer's Shipbuilding B 2½, ditto A 1½, Earle's Shipbuilding 1 to 1½, and Sheepbridge A ¼, besides others of less amount. A fair number of transactions are marked in Bolckow ordinary issues, which, as we have said, are distinctly better; and in Ebbw Vale, but in these prices are without alteration on the week.

COTTON SPINNING, &c., shares, whilst there is not much business passing publicly exhibit a firm undertone, sellers being shy of putting lots on the market except at fair advance on recent buying quotations.

MINES, and TELEGRAPH and TELEPHONE provide no topic worthy of special record, save for fall of ¼ in De Beers amongst the first named. In Miscellaneous Ship Canal issues have been quieter than of late, and though marking nearly 4 for ordinary and only 5½ for preference on Friday last, and thus showing more decline from best points, are only ¾ to 1½ respectively lower than a week ago. Liverpool Gas A are 4, Gas Light and Coke A 1 to 2, and Bovril ¾ higher. Livers are 1, and Bryant and May's ¾ lower. Other changes on either side small in amount. The only change in prices for Breweries is rise of ¼ in Biddington's.

LATER (4 P.M.).—Home Rails continue in request, with Scotch Stocks particularly better. Not much doing in either Americans or Canadians, but prices are a little stronger. Coal and iron shares again in request, and Ship Canals steady, and the turn better on the day.

SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

STIRLING.—MR. J. GRANT MACLEAN, stockbroker and ironbroker (January 25), writes:—During the past week the markets have been more active, and prices have generally improved on the more favourable commercial and financial prospects.

In shares of coal, iron, and steel companies prices show a general improvement on favourable trade reports. Bolckow Vaughan are at 12½, Ebbw Vale, 2½, Marbella 5s. to 5½, Merry and Ovingham Preference 10½, Nantyglo and Blaenau, 6s. to 7s., Midland and Benhar 4s., (been 4½), Rhymney 3s. 6d., Steel Company of Scotland, 6s. 6d., Stewart and Clydesdale 8½, Sheepbridge A 1½, and Wilson's and Clyde coal 8½.

In shares of copper concerns there has been little business doing, owing to the dropping state of the market for the metal. Tharvis and Tinto both easier, but Marbella keep steady.

In shares of home mine business is also quiet. Leadhills firmer at 20s. to 25s. Carn Brea are at 13½, Killifreth 7s., and West Kitty 8.

In shares of gold and silver mines a fair amount of business has been done. Montana firmer, about 7s. 6d. The Victoria (Charters Towers) Company will pay a dividend of 6d. on February 7. Among the Indian mines, Champlain Reef, and Oregum have both improved on favourable mine reports and the prospects of additional stamps, but Mysore and Nundydroog are dull. Mallina Gold, P-hang Corporation (Preference), and the United Gold Fields of Manica shares all offered. African Gold Recovery are at 2½, 6d.; Australian Gold Recovery, 7s. 6d.; British South Africa Chartered, 22½, 6d.; Broken Hill Proprietary, 5s.; Balaghat, 7s. 6d.; Ball's Land, 1s. 9d.; Cassel, 17s.; Caratal, 4½d.; Consolidated Gold Fields of South Africa, 3s. 3d.; Day Dawn P.C., 5s. 9d.; Gold Fields of Mysore, 20s. 3d.; Holcomb Valley, 8d.; Jackson Gold Fields, 1s. 3d.; Idaho, 3d.; Knight's, 17s. 6d.; Lisbon Berlin, 2s. 3d.; La Plata, 7½d.; Mysore Wynad, 2s. 9d.; New Aurora West, 11s.; New Central Borneo, 2s. 6d. to 3s. 6d.; Pabang Exploration, 1s.; Silver King, 3s. to 5s.; St. John del Rey, 20s. 6d.; Sutherland Reef, 1s. 6d., and West Argentine, 2s. 8d. In shares of miscellaneous companies there has not been much business doing. In oil companies shares prices are better, owing to a rise in the markets for ammonia. Froburn are at 8½; Pumpherton 7½, but Young's are lower at 22s. 6d. Petroleum Oil Trust shares are at 19s.; Lewes Chemical are at 6½; Nobel's Explosives, 12½; Price's Candle, 25s.; and Roburite Explosives, 31s. 3d.

EDINBURGH.

MEASURES. THOMAS MILLER and SONS, stock and share brokers, 69, Hanover-street, Edinburgh, report as follows under date of January 25:—Home Railway stocks have been very strong. Caledonian deferred and North British have attracted most attention, and there has been a considerable overturn in them. The former has risen from 34 to 37, and the latter from 34½ to 36½. Glasgow and South Western has improved from 10½ to 10½, Great North of Scotland from 8½ to 8½, Brighton Deferred from 15½ to 15½, Chatham from 12½ to 14½, Sheffield Deferred from 22 to 25, South Eastern Deferred from 18 to 20, Great Eastern from 7½ to 7½, Great Northern Deferred from 4½ to 5½, Canadians and Americans rather better. Clydesdale Bank shares have improved from 20½ to 20½. Commercial have rooded from 6½ to 6½. There is scarcely a change in Insurance shares. Commercial Unions have improved from 25 to 28½. Scottish Union and National A are 3d. higher at 77s. 6d. and Scottish Life 3d. lower at 33s. Coal shares enquired for at improved prices. Addie and Bon have risen from 9 to 9½; Cowdenbeath from 1¼ to 1¼; Pife from 27½ to 28½; Lochore and Caplethrae from 17s. 6d. to 20s.; Wons and Clyde from 19½ to 20½. Midland and Benhar from 4s. to 4s. 3d. Merry and Ovingham Preference have improved from 10½ to 10½; Marbella from 5s. to 5s. 6d. Arizona Copper have declined from 8s. 3d. to 8s. Gold and silver shares quiet. Edinburgh Tramways have declined 9½ to 9½. Oils quiet. Pumpherton up from 19½ to 7½. New Zealand and Australian Land 25s. up at 101. Distillers 5s. up at 15. Nobel warrants 5s. up at 13½. Union Steamship of New Zealand 5s. down at 8.

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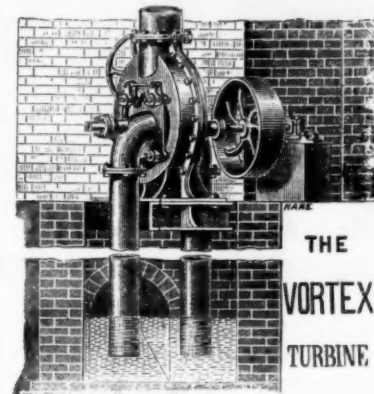
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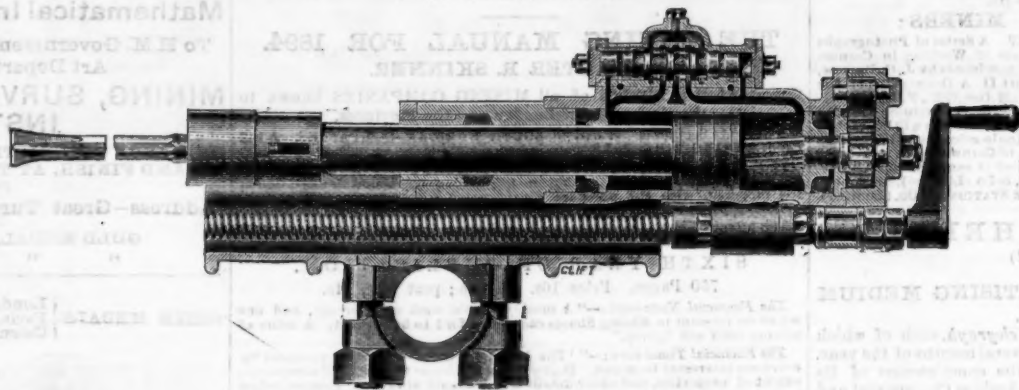
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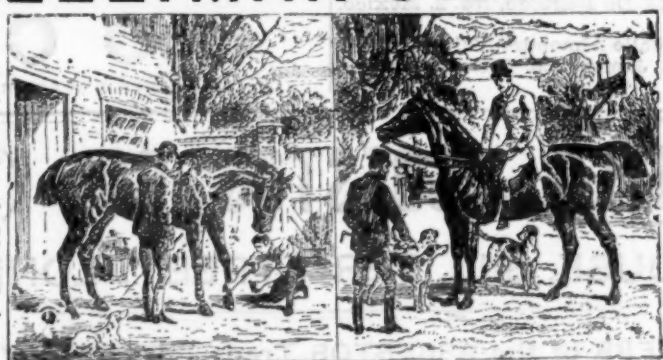
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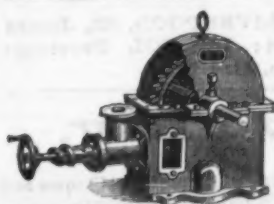
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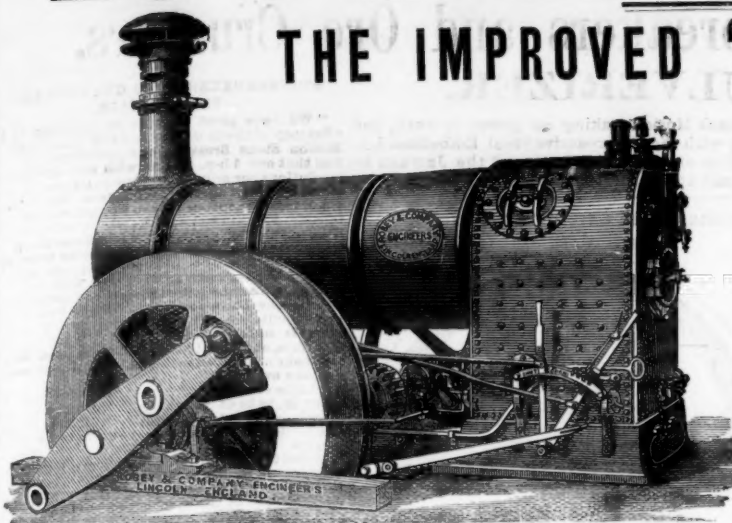
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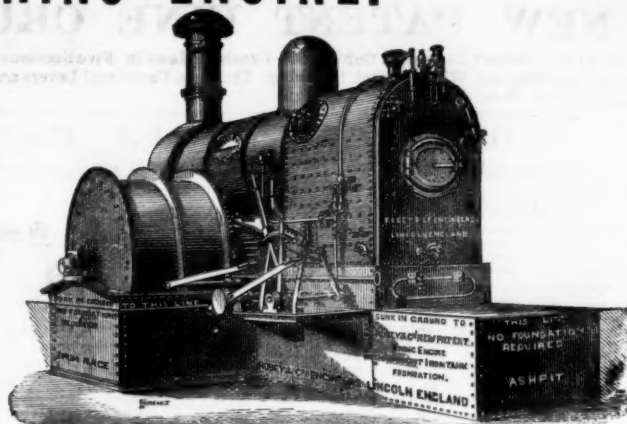
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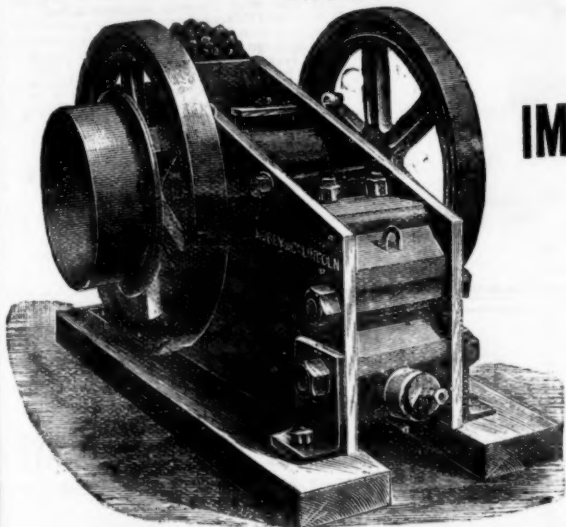


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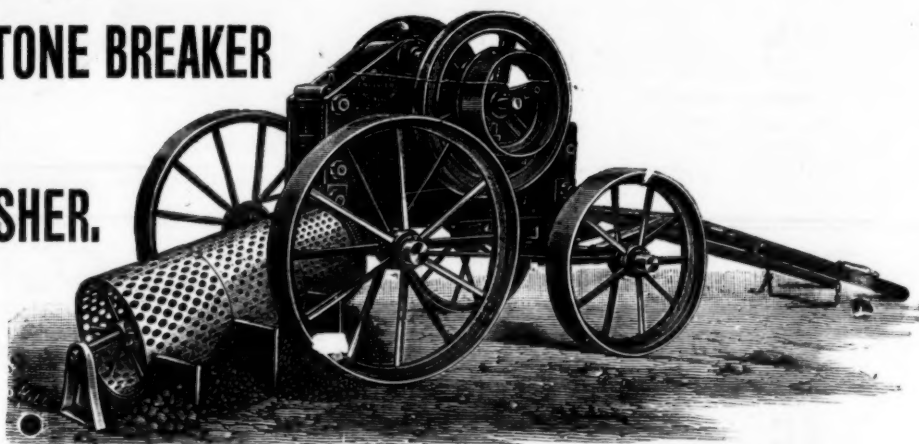
ROBEY & CO. are also manufacturers of Portable Engines, Semi-Portable Engines, Robey Engines & Locomotive Boilers, combined (both Compound and Simple); Vertical Engines, High Speed Engines, Horizontal Fixed Engines (Simple and Compound), Sugar Mills, Locomotive, Cornish and Vertical Boilers, Winding Engines, Head Gears, Mine Pumps, Centrifugal Pumps, and every description of Machinery for Builders and Contractors. Also makers of Patent Gas Engines and Patent Portable and Semi-Fixed Oil Engines.



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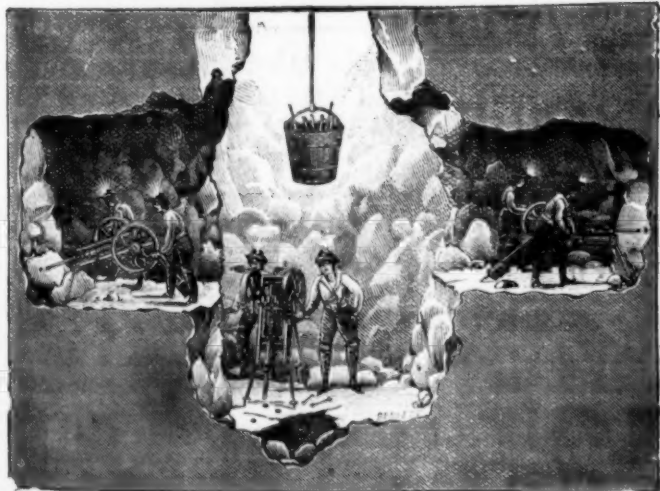
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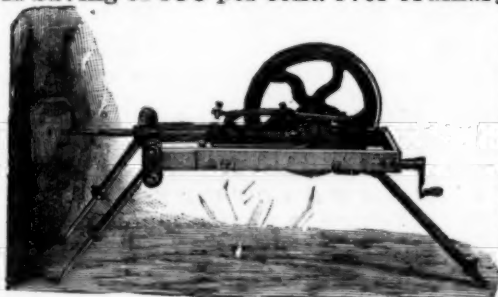
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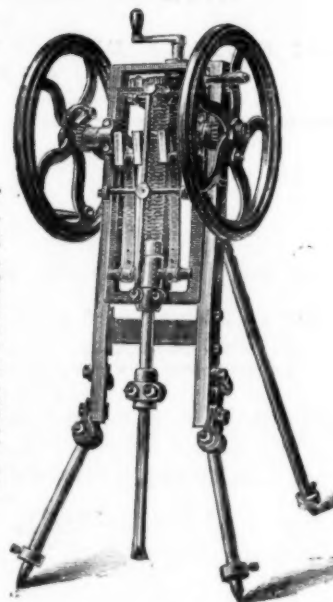
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Fitted with Patent Reversible Cubing and Crushing Jaws in Five Sections, and with Surfaced Rocks, requiring no White Metal in lining. Crucible Cast Steel Levers and Toggle Cushions, Brass or Gun Metal Bearings throughout.

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"The Pulverizer has now been working two months, and answers its purpose most satisfactorily."

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"In reply to your favour, I have much pleasure in informing you that the 12x3 Pulverizer we had from you is giving us every satisfaction. The material we are operating on is an exceptionally hard one. I am well satisfied with its working."

"Our experience is that the motion and mechanical arrangements of your machine are the best for pulverizing that we have ever met with."

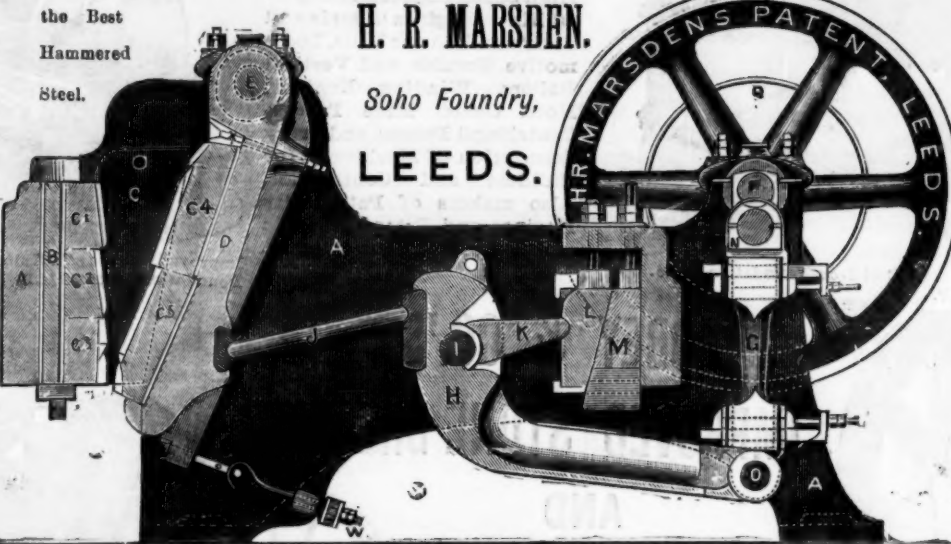
"The reports from our mines as regards the working of your Fine Crusher (30x6) recently supplied are very favourable, although we cannot quote you exact figures. On being put into position it was tried by hand, with the result that it made short work of the biggest pieces of ore we put into the hopper. You might say how long you would take to deliver another of the same size."

"As I once before stated, your machine is a perfect pulverizer."

"I am sure the machine will be a success, and a great one, and there is any amount of demand for such a machine. We can work it with 20 lbs. of steam and our engine, which is a 12-h.p., plays with the work, in fact we run the Stonebreaker and the Pulverizer both together with 35 lbs."

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Hammered
Steel.



THIS HAND-HAMMER ACTION STONEBREAKER TAKES MUCH LESS POWER THAN ANY OTHER EXISTANT.

Positive Draw Back Motion taking no power to work, and entirely dispensing with the old expensive Steel Embedded I.R. Spring. The motion or length of Stroke of the Jaw can be increased or decreased at pleasure, to suit any material.

70 First-Class Gold and Silver Medals.

CATALOGUES FREE.

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STONEBREAKERS AND ORE CRUSHERS. TESTIMONIALS.

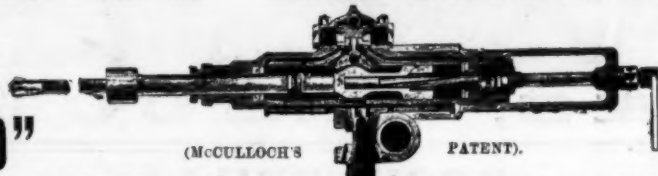
"We have great pleasure in testifying to the efficiency of the 15 in. by 8 in. Lever Hand Hammer Motion Stone Breaker you supplied us with. We find that our 4-h.p. Engine with ease drives it 100 revolutions per minute, and breaks six ton per hour of the hardest 'Diorite' Whinstone. This sample is much better than any hand-broken we have ever got. Our Mr. P. J. GRAYHAM, O.E. who was Surveyor of Highways for ten years, before joining our firm, says it is by far the most economical machine he ever had to do with; he had two of your former make, and one of another firm's make; compared with these your machines your new patent gives the following advantages:—The horse-power required to drive is exactly 40 per cent. less. The sample of the broken material is so far superior to that broken by other machines, and even to that broken by hand that we can make no comparison. I is by far the best sample we have ever seen."

"I now order three of your Stone Crushers, 15 by 10, to be of your very best construction, and to include two extra sets of Jaws and Chocks for wear. The last two 24x13 machines you sent me, which are at work in this colony, are doing very well. You will soon find that the railway contractors will adopt your machines in preference to the colonial ones—some of which I have. I know other contractors have had as many as nine of them, which have not given very good satisfaction. Once they know of you thoroughly, I believe you will do a good trade with the colonies. For reference of the high character of your constructions you can refer to me as having used them with the very best results, both in New Zealand and this colony, and much prefer them to the colonial article, both in point of construction and liability to go out of order. The material we are crushing is very hard blue stone, for railway ballast purposes. Push on with the order as quickly as possible. I do not think it necessary to have any engineering inspection. I have brought your machines prominently under the notice of all large contractors in this colony, likewise the Government. Many of the contractors have spoken to me in reference to their capabilities, and could only tell them that they are by far and away the best and most economical I ever used. The very fact of me having purchased from you at various intervals and various places, and two above 12 years ago, and having tried all the other makers is sufficient guarantee of the capabilities and the working of your machines. Yours is every way surpass all others."

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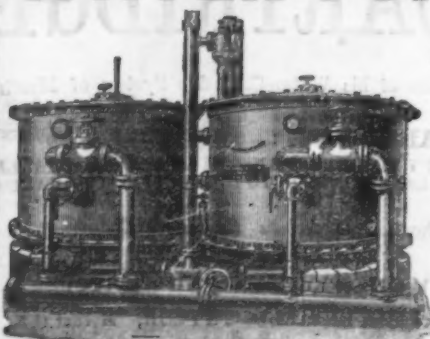
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